Social Representations of Emerging Infectious Diseases

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Declaration

I, Peter Washer, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Abstract

Since the 1990s a new biomedical discourse has developed around 'emerging infectious diseases' (EID). This category is associated with an increased interest in the subject of infectious diseases in scientific and lay spheres. Some of the media scares prompted by individual diseases such as Ebola and AIDS have been the subject of social scientific research. However, there is less focus in the social scientific literature on the media coverage of these epidemics as part of this wider EID discourse. Risk is an important topic in contemporary social science, although theoretical work on risk rarely focuses on the risk posed by epidemics of infectious disease. This thesis thus makes two contributions: It places three empirical studies of the media representations of recent epidemics of emerging infectious diseases in the context of the theoretical risk literature. Secondly, using Social Representations Theory, it will examine how these epidemics were described in the media, who or what was said to be at risk from them, and who was blamed for them. Newspaper reports from British national newspapers were downloaded from the Lexis-Nexis internet news service and analysed using qualitative research software. In the first case study, the 2003 SARS epidemic, similar blaming mechanisms were described as in previous studies of epidemics of infectious disease, namely that the threat was distanced by blaming the *other*. The subsequent case studies, 'mad cow disease' and the 'hospital superbug' MRSA demonstrated different patterns of blame: where the threat could not be externalised in the same way, the blame was laid at the door of 'our leaders', as was blame for squandering or misuse of modern technology. This thesis points to how the social representations of emerging infectious diseases 'map onto' existing ideas about health and disease that circulate in the culture, as well as forming a focus for wider societal concerns.

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Chapter 1 – The Alleged Conquest of Infectious Disease

> On the basis of what has happened in the last thirty years, can we forecast any likely developments for the '70's? If for the present we retain a basic optimism and assume no major catastrophes occur and that any wars are kept at the 'brush fire' level, *the most likely forecast about the future of infectious disease is that it will be very dull.* There may be some wholly unexpected emergence of a new and dangerous infectious disease, but nothing of the sort has marked the last fifty years. There have been isolated outbreaks of fatal infections derived from exotic animals as in the instance of the laboratory workers struck down with the Marburg virus from African monkeys and the cases of severe haemorrhagic fever due to Lassa virus infection in Nigeria. Similar episodes will doubtless occur in the future but they will presumably be safely contained
>
> *The Natural History of Infectious Disease*
>
> (MacFarlane Burnet & White, 1972: 263) (italics not in original)

This thesis explores the phenomenon of 'emerging infectious diseases' (EID) through a detailed examination of British media coverage of three of these diseases: the story of Severe Acute Respiratory Syndrome (SARS) in 2003; the 'mad cow disease' story, spanning the period from 1986 to 1996; and the so-called 'hospital superbug' story of *methicillin resistant staphylococcus aureus* (MRSA) which became increasingly newsworthy over the ten-year period to 2005. It will examine the newspaper reporting of these three diseases, and pose the following questions: Firstly, how were they explained to the readers? Secondly, who or what was said to be at risk of these diseases? Finally, who or what was said to be to blame for these new phenomena?

The thesis will argue that up to the 1970s there was increasing optimism about the future of infectious diseases. By the early years of the twenty-first century, that optimism had been replaced by a feeling that infectious diseases were no longer a thing of the past, but of the future. This thesis examines why and how that change took place. In particular it will cast light on what insights this change provides into the wider concerns of post-industrial societies, namely those societies that are economically and technologically advanced, which are no longer dependent for their productivity on large-scale, labour-intensive industrial manufacture, and in which knowledge is the central preoccupation (Bell, 1973).

The research reported here spans two disciplines, Social Psychology and Science and Technology Studies. Firstly, using as its theoretical framework Social Representations Theory, a branch of Social Psychology, the thesis will report a detailed content analysis of three of these diseases as they 'emerged' as newsworthy topics in the period between 1986 and 2005. Secondly, using the insights of Science and Technology Studies, this thesis will contextualise the development of this new strand of biomedical discourse (*Emerging Infectious Diseases*) in the history of infectious disease medicine. It will examine how the new discipline was built, what purposes it serves, and what insights it may give concerning biomedical and scientific discourse in the post-industrial age.

This chapter will provide some historical context to the phenomenon of 'emerging (or re-emerging) infectious diseases' (EID), giving an historical

account of what has been dubbed *the golden age of medicine*. As a result of the 'alleged conquest of infectious disease' (Berkelman & Freeman, 2004) by the 1970s the focus of biomedical research energies in the richer countries at least had shifted from infectious to chronic diseases, the so-called 'diseases of civilisation' such as heart disease, diabetes, renal failure, obesity, Alzheimer's disease and particularly cancer. The chapter will then look in detail at the period immediately before and after the appearance of AIDS, when new infectious diseases were starting to become known. Following the appearance of AIDS in the 1980s, a new landscape developed in biomedical and lay thinking about health. From 1989 a new strand of biomedical discourse, 'emerging infectious disease', has increasingly come to prominence, so that by the early years of the twenty-first century, infectious diseases are no longer thought to be a thing of the past, but of the future.

Risk is an important theme in contemporary social science, and media discussions of EID often centre on who or what is at risk of them. Chapter 2 will therefore explore different theoretical approaches to risk which will be used in the empirical chapters of the thesis, in particular the work of Mary Douglas on risk and blame and Ulrich Beck's *Risk Society* thesis. The theory of social representations, drawing on the work of Moscovici and others, is very appropriate in the context of EID and has a good history of providing valuable insights. Therefore chapter 2 will describe the theory and recount some empirical social representation theory studies which highlight issues pertinent to this thesis.

As well as examining the three case studies in light of the theoretical literature on risk, the case studies of this thesis also sit alongside, and contribute to, a growing body of literature on media coverage of EID, from both within and outside a social representational perspective. Chapter 3 will provide a review of that literature. Given the pivotal importance of AIDS in this context, the chapter will give particular attention given to the media coverage of the early years of the HIV / AIDS epidemic. In reviewing the literature, Chapter 3 will examine how 'templates' for reportage of EID become established; templates which are often based on historical precedent or other cultural references but recur in the media coverage of the later epidemics examined in this thesis. Chapter 4 gives a comprehensive account of the methods used in the subsequent empirical case studies, which are the subject of Chapter 5 (SARS), Chapter 6 ('mad cow disease') and Chapter 7 (the 'hospital superbug' MRSA).

The final chapter, Chapter 8 will draw the various strands of the thesis together and compare and contrast the representations of the three case studies. It will look across the media coverage of the three diseases and consider how they were described, who or what was said to be at risk of them and who or what was held to blame for the new threats. It will explore any ways in which this research can be said to move the theoretical work on risk and social representations theory forward. The chapter will then step back and examine the phenomenon of EID as a new biomedical discourse and end with some insights as to why there is this increased interest in the subject of infectious diseases in post-industrial society.

1.1 Infectious diseases and modernity

In order to examine the phenomena of emerging infectious diseases, the first issue that needs to be addressed is what exactly makes an infectious disease 'emergent'? The term is now widely used, although it was only coined in 1989 and only gained wide currency both within and outside scientific and biomedical circles after about 1995. Many of the diseases now regarded as 'emerging' are not new, for example measles. The category was created by a group of influential US doctors and scientists who wanted to draw attention to the threat they felt was posed by the indifference and neglect of public health in the latter part of the twentieth century. This neglect was due to the perception that infectious diseases were a 'thing of the past' and to optimism about real and perceived victories over infectious disease. Why did this period from the inception of bacteriology in the 1870s to the 1970s become known as *the golden age of medicine?*

Between 1875 and the beginning of the 1890s, around 50 specific agents of infectious diseases affecting humans and animals were identified, isolated and cultured, including anthrax, typhoid fever, tuberculosis, cholera, plague, malaria, and syphilis. In the twenty years before 1918 there was a steep decline in mortality rates throughout the Western world. Then in 1918 and 1919 there was a global pandemic of 'Spanish' influenza, which is estimated to have killed between 50 and 100 million people (Barry, 2005). Some authors have argued that this caused a crisis of faith in bacteriology (Tognotti, 2003), although others (Karlen, 1995) argue that in the wake of the 1918 epidemic

people still saw the future of medical progress not in terms of the unsolved lethal forces of influenza but in the rescue of children from infectious diseases. By the 1930s a new era of longevity was promised, and an end to infectious disease.

Paul Ehrlich, the father of modern chemotherapy, coined the term 'magic bullets' in 1905 to describe new drugs that promised, as he put it, 'to strike only the objects against which they are targeted' (Cannon, 1995: 96). The term has its origins in a Germanic folk story of the sixteenth century, in which the Lapps were said to have infused their targets with poison by *zauberkugel:* 'magic bullets'. Thus the metaphor of the 'magic bullet' had been summoned up from the alchemical tradition of early modern Europe by Ehrlich to communicate the significance of a new means of treating disease (Bud, 2006). This metaphor, together with that of the 'wonder drug', was widely used in the 1930s and 1940s to capture the optimism and promise of a new *golden age of medicine.*

In light of the apparent successes of biomedicine, in 1948 the US Secretary of State George C Marshall declared at the Fourth International Congress on Tropical Medicine and Malaria that the conquest of all infectious diseases was imminent. By 1951 the World Health Organisation declared that Asian Malaria could soon reach a stage where it was 'no longer of major importance', given the discovery of dichloro-diphenyl-trichloroethane (DDT) and organochlorines and in 1955 the World Health Organisation set out a global campaign to eradicate malaria (Garrett, 1995). In 1967, the US Surgeon General told a

White House gathering that it was time to close the book on infectious diseases and shift all national attention (and funding) to what he termed the 'new dimensions' of health, namely chronic disease (Stewart, 1967 in Garrett, 1995).

An important caveat is that the success against infectious disease outlined here is something from which many of the world's population were excluded: namely the poor in the developing world. As Farmer (2005) comments, '...although pathogens readily cross borders, the fruits of research are often delayed in customs' (Farmer, 2005: 199). Even in the twenty-first century, most of the poor in the developing world receive no effective medical care whatsoever. For some people, there is no such thing as a vaccine against measles or polio; for many, tuberculosis is as lethal as AIDS (Farmer, 1999). Thus talk of the promises of modernity must be confined to those who were able to benefit from them. However, although the benefits of biomedical progress *were* predominantly reaped by people in the richer countries, there were also some successes against infectious diseases that benefited the people of the developing world.

The period from inception of the discipline of bacteriology in the 1870s until roughly the 1970s, has been dubbed *the golden age of medicine*. The unbridled optimism about biomedical progress was a strand of a wider optimism in the project of modernity, as biomedical advances were some of the most tangible fruits of modernity and techno-scientific progress. There was an unprecedented rise in life expectancy and decrease in infant mortality in the 'modern' age (in developed countries), and this can be attributed to a large extent to the decrease

in morbidity and mortality from infectious diseases. There were three aspects that explain this decline in deaths and illness from infectious diseases: firstly, general improvements in environmental conditions, nutrition and 'public health' provisions such as adequate sewerage; secondly, there were vaccination campaigns, which in particular reduced the numbers of deaths from traditional diseases of childhood; finally, in the post World War II era there was the introduction of antibiotics that could cure bacterial infections. These three developments are important in setting the scene for the shattering of that optimism post AIDS and therefore bear closer examination here.

Non-medical improvements in health

Traditional accounts of the decline of morbidity and mortality would argue that these were due to the so-called 'medicalisation of society' and the progress in medical knowledge in the twentieth century. These accounts were challenged by McKeown (1976) in his groundbreaking work *The Modern Rise of Population.* He agrees with the 'medical progress' model insofar that he agrees that the modern rise of population was a result of the decline in mortality from infectious diseases. However, he argues that medical interventions such as immunisation and innovations in drug therapy that were conventionally thought to be the cause of this increased longevity were not in fact responsible.

McKeown argues that population growth from the eighteenth century onwards was a unique event that could not have been simply due to an increase in birth rates following the withdrawal of restraints on fertility. Birth rates have been

falling in most developed countries since they have been recorded, and are falling in developing countries now. Therefore the rise in population must have been because of a decrease in mortality. This was essentially owing to a reduction in deaths from infectious diseases, and to a lesser extent to two non-infective causes, starvation and infanticide. This enormous reduction in deaths could also not be explained by a reduction in the virulence of pathogenic organisms, although this may have been a factor in some diseases (e.g. scarlet fever) which became less virulent over time. Neither was it influenced substantially by immunisation or by drug therapy, at least before 1935. So McKeown's thesis is that the decrease in deaths from infections from conditions in which specific medical measures were effective earlier than 1935 (namely smallpox, syphilis, tetanus, diphtheria and diarrhoeal diseases and some surgical conditions) made only a small contribution to the total decline in the death rate after 1838.

McKeown argues therefore that the explanation for the decrease in deaths from infectious disease was due to improvements in the environment. He argues that from the second half of the nineteenth century, intestinal infections substantially reduced due to the introduction of water purification and sewerage disposal and improved food hygiene, especially with regard to milk. Preceding advances in hygiene were improvements in nutrition due to greater food supplies. This accords with the historical evidence on food supplies, for example the population trebled in England and Wales between 1700 and 1850 without food imports; and this data also tallies with current knowledge about the relationship between malnutrition and infectious diseases. The decline in

mortality from non-infective causes such as infanticide and starvation in the eighteenth and nineteenth centuries and a large number of conditions in the twentieth century was due partly to medical measures, but also to contraception and improvement in nutrition. Infanticide is believed to be the most prominent cause of non-infective death until the late nineteenth century. Its virtual disappearance was as a result of the availability of contraception.

McKeown's account is particularly relevant to this thesis because it acts as a counterpoint to those who would argue that biomedical advances such as vaccination and antibiotics led to *the golden age of medicine* and consequently the solution to the EID 'problem' is a similarly techno-scientific or biomedical one. He demonstrates that the optimism surrounding biomedicine's apparent successes in reducing mortality from infectious causes, during the period 1870 to 1935 at least, was in part a mirage, a projection of a wider optimism and faith in modern progress.

Some commentators argue that McKeown and others downplay the role of medicine and are too critical of it. Velimirovic (1984) points out that mortality from infectious diseases has declined, but morbidity rates have not decreased significantly; the percentage of hospital beds occupied by patients suffering from infection was as high in the 1980s as it was fifty years previously. These criticisms of McKeown are unjustified for the most part: McKeown's original question was what caused the rise in population after the eighteenth century? His answer was that it was better nutrition and an improved environment. However, he acknowledges that after the sulphonamide drugs became available

in 1935, and later when antibiotics became available, they did reduce mortality rates.

McKeown's point is really strongest concerning the pre-1935 period, when medical knowledge was poorly developed and when the epidemiological evidence supports his thesis. So while cases of infectious diseases were declining before the introduction of antibiotics, medical science could do little for those who contracted one of several feared bacterial diseases such as tuberculosis or syphilis. However, having acknowledged the validity of McKeown's argument, neither can one ignore the successes of modern biomedicine in relation to infectious diseases. In particular, biomedicine made significant advances with vaccination campaigns against smallpox and what were once relatively common childhood diseases such as diphtheria, polio and measles; and with the introduction of antibiotics and their efficacy against bacterial infections. It is in the context of these successes that the emergence and re-emergence of infectious diseases in the period after the 1970s must be set.

Vaccination campaigns

In conventional accounts of *the golden age of medicine,* vaccination and antibiotics are often cited as the most tangible benefits of scientific progress. Indeed, vaccines did play a major part in the reduction of deaths from infectious diseases, and the stories of the development and widespread use of vaccination and of the introduction of antibiotics are therefore important

contextualising ones for this thesis. The first modern vaccines were for typhoid and were tried on a large scale on British and French soldiers in World War I, followed by vaccines for tetanus (1921) and yellow fever (1932) (Moulin, 2000). The large scale use of potent diphtheria antiserum was introduced in 1894 and immunisation against diphtheria with toxoid was introduced in 1923. These developments together brought epidemics of diphtheria to an end, although the disease remained an occasional problem until World War II. In the US in 1920 there were 200,000 cases of diphtheria, by 1930 60,000 and in 1940 20,000 cases. By 1973 only 228 cases were reported in the entire US (Bollet, 1987).

Scarlet fever and measles had been becoming milder throughout Western Europe and America both in terms of incidence and mortality since 1880, well before preventative measures were introduced (Zinsser, 1935). There is no treatment for measles once infected, and before the 1960s quarantine was the only protection. The attenuated measles virus vaccine was developed by John Franklin Enders from Harvard and was successfully tested in the US in 1961. It had become widely available in the US by 1963. Before that in the US there were 4 million cases per year, with 48,000 requiring hospitalisation and 5000 deaths. 4000 of the more serious cases led to encephalitis, and 1000 of those were left with permanent brain damage and deafness (Oldstone, 1998). By the 1980s measles was rare in developed countries and the World Health Organisation stepped up global efforts against the disease. In the 1980s and early 1990s a 78% global coverage was achieved, leading to a 70% drop in death rate to approximately 1 million deaths worldwide (Oldstone, 1998).

Another great vaccination success story was against poliomyelitis. Although epidemic polio was a worldwide phenomenon, over half the reported cases between 1919 and 1934 occurred in the US and Canada. Cases increased steadily until 1952, when they reached an unprecedented 56,000 in the US (Gould, 1995). There were two rival vaccines for polio: a live vaccine developed by Sabin in 1953 and tested in the USSR; and an attenuated (killed) vaccine developed by Salk in 1951 and tested in the US. In 1954 the attenuated Salk vaccine underwent a randomised clinical trial in the US and on 12th April 1955, it was announced that it was 'safe effective and potent'. Church bells were already pealing in some American towns at the good news (Gould, 1995). By 1967, there were only 1000 cases of polio in the US and Europe (Garrett, 1995).

In Britain there was never the same urgency about polio as it was a comparatively rare disease until after World War II. Britain had its first large epidemic in 1947, when 7,776 cases were reported. Immunisation was introduced for children in Britain in 1956, and a campaign was launched to encourage the wider uptake of the Salk vaccine in 1958. The Sabin oral polio vaccine (OPV) was officially endorsed and introduced into Britain in 1962 (Gould, 1995). There were only 2090 cases of poliomyelitis reported worldwide in 1996, and the disease was targeted for eradication by the World Health Organisation in the early twenty-first century (Oldstone, 1998).

In 1900 smallpox persisted as an endemic disease in most countries. However, vaccination against it was widespread throughout the industrialised world and consequently its incidence was lower in industrialised countries. Improvements in the quality of the vaccine and the methods of distribution, and a steadily improving public health infrastructure meant that by the early 1950s endemic smallpox had been eliminated from North America and Europe (Fenner et al., 1988). In 1959, at the 12th World Health Assembly, the USSR successfully proposed a resolution calling for worldwide eradication of smallpox. By 1967, Brazil was the only South American country where smallpox was endemic. There were substantial gains in Asia between 1959 and 1966, particularly the elimination of smallpox from China in 1961, although it remained rampant in India. By 1966, 27 of the 47 countries of Africa still had endemic smallpox (Fenner et al., 1988). In 1967, the Intensified Smallpox Eradication Programme was instituted by the World Health Organisation, which led to a rapid fall in the number of developing countries with endemic smallpox. The biggest challenge was the eradication of smallpox from the Indian subcontinent, which was achieved by 1975. By 1976, the only remaining endemic country was Ethiopia, where smallpox persisted and from where it spread to Somalia. Smallpox was eventually eradicated from the Horn of Africa at the end of 1977 (Fenner et al., 1988).

By the 1970s smallpox was eliminated and cholera and plague were also 'conquered', in the developed world at least. the World Health Organisation joined the United Nations Children's Fund (UNICEF) in encouraging a worldwide Extended Immunization Program, including vaccines against

diphtheria, tetanus, poliomyelitis, whooping cough and later measles, under the banner 'Health for All in the Year 2000' (World Health Organisation, 1978). With the successful eradication of smallpox as the model, the World Health Organisation listed tuberculosis, polio, meningitis, tetanus and measles as the next targets for 'eradication'. However, by 1977 the World Health Organisation finally abandoned all hopes of eradicating malaria and by 1980 cases of the disease had increased by 230% on the Indian subcontinent over the four years 1972-6 (Garrett, 1995: 205). By the 1980s the idea that it was possible to eradicate diseases had been discredited (Moulin, 2000).

Antibiotics

The antibacterial era began in 1910 in Germany when Paul Ehrlich discovered Salvarsan, the first drug to be successful against syphilis, with Prontosil following in 1935. These drugs, the sulphonamides, were used to treat pneumonia, meningitis and infections of the gut and urinary tract (Cannon, 1995). They were particularly effective against streptococcal infections such as puerperal fever, which killed 2 in 1000 women in labour up to the 1930s (Kingston, 2000).

When penicillin became widely available in the mid 1940s its role may have been to sustain earlier improvements in morbidity and mortality from infectious disease. Yet, in the post war atmosphere of optimism, it seemed that the promise of this 'magic bullet' was endless:

> For the first time in human history a generation would feel, however over optimistically, safe from infectious disease and particularly from sexually transmitted disease. Surveys in France and Britain have shown that from about 1960 lay people began to have a quite unaccustomed confidence about 'real disease' by which was meant infectious disease.
>
> (Bud, 1998 :307)

For the post war generation, the promise of antibiotics was widely taken to mean that fear of infectious diseases was a thing of the past, and that soon cures for all infections would be available (Bud, 2006).

One of the greatest successes for antibiotics was in the treatment of tuberculosis. The rise of tuberculosis correlated with the rise in industrialised society in nineteenth century Europe and its decline was already well underway by the 1940s because of improved living conditions and general health (Dubos & Dubos, 1952). Decline in the prevalence of tuberculosis was also due to vaccination, following the 1919 development by Calmette and Guerin of a weakened form of tuberculosis bacteria that had been tested in animals, the bacilli Calmette-Guerin (BCG). By 1928, over 100,000 people had received the BCG. In the BCG campaign after WWII, nearly 14 million people received the vaccine. Yet until the early 1950s there were no drugs available for people who had tuberculosis. Streptomycin was first introduced for clinical use in 1946, followed by Para-aminosalicylic acid (PAS), Isoniazid in 1952, Pyrazinamide in 1952, Ethambutol in 1963 and Rifampin in 1966. Fifty years later, Isoniazid

and Rifampin remained the most powerful drugs against tuberculosis (Reichman & Tanne, 2002).

The other great success of antibiotics was against 'venereal disease'. Although there is debate about the numbers of people who were infected with syphilis, there was an undeniable increase in numbers. For example, in early twentieth century France, 15 to 17% of all deaths were attributed to it, with more than half of these contracting the disease in adolescence (Herzlich & Perret, 1984). Penicillin completely cured syphilis with just one dose. By the mid 1950s it seemed that venereal infections could no longer be considered a major public health threat.

In sum, in the twentieth century there was an unprecedented increase in population as a result of an increase in life expectancy, particularly in developed countries. This increase in life expectancy was due to the decrease in deaths from infectious diseases. General improvements in health were largely responsible for this decreased morbidity before about 1935. However, biomedical advances such as vaccination campaigns and the introduction of antibiotics played a major part in the successes, particularly after World War II. Until the very end of the century, 'common sense' belief was that the future would hold yet more advances against infectious diseases. The appearance of new and apparently 'unconquerable' threats from infectious disease and a future where biomedical progress could be rolled back seemed inconceivable to biomedical scientists and lay people.

1.2 'The age of fevers is over'

By the 1970s the success of biomedicine against infectious diseases was thought to be complete. Indeed, the concern was that increasing numbers of people living on the planet due to the decrease in mortality and increased life expectancy would cause a population crisis. Although there were critics of biomedicine, the area of infectious diseases was something that was regarded as an unqualified success. Attention shifted to cancer and chronic diseases, the so-called 'diseases of civilisation'. This section will examine some evidence for this shift in mood.

McNeill (1976) in his history of infectious diseases *Plagues and Peoples* wrote:

> Success was sufficient so that by the second half of our century, professionals seriously proposed the global eradication of a number of mankind's most formidable infections, and thought it a feasible goal for the near future. But as is their wont, such massive and fundamental successes in altering humanity's experience of disease carried within them a potential nemesis: population crises on a continent wide scale seemed to supplant the localized population crises afflicting the new industrial cities with which nineteenth century medical reformers had to cope.
>
> (McNeill, 1976: 240)

McNeill's perspective sees trouble ahead, but the *nemesis* will not be from the 're-emergence' of old pathogens nor the 'emergence' of new ones, but from the

successes of biomedicine against infectious diseases leading to a population crisis. Interestingly, McKeown (1976), writing at the same time as McNeill similarly sees the global rise in life expectancy and population consequent on the decline of deaths from infectious diseases as a 'problem' which the world has to address before there are 'disastrous' consequences.

Another interesting commentary on infectious diseases in the period, in this case from France, and from a social scientific perspective rather than a epidemiological / biomedical perspective such as McKeown's (1976) or a historical one such as McNeill's (1976) is Herzlich & Perret's (1984) *Illness and Self in Society*. This study covers the period 1960 to 1980. Its general thesis is that the age of infectious diseases was over and that the future of medicine (and of the sick role and representations of illness) lay with cancer and with chronic medical conditions such as diabetes and renal disease. They argue that 'the age of fevers is over'– plague and the other great epidemics such as cholera and leprosy lived on in the culture 'as deeply as myths' but were no longer part of individual consciousness. Smallpox had disappeared and typhus was rare. Childhood diseases such as measles, mumps, scarlet fever, whooping cough and chicken pox by then appeared as a 'normal' stage of development. Polio was on the wane by the time of their study and tuberculosis was a 'thing of the past', although the memory of the terror of the past was still vivid in people in 1960.

> In France at least, 1960 represents a turning point, a pivot between a past dominated by infectious disease – poliomyelitis was its last

> embodiment, and tuberculosis is its symbol to this day – and a present in which illness has definitely assumed a different face.
>
> (Herzlich & Perret, 1984: 46)

By the 1970s in other areas such as psychiatry, obstetric care and care of the dying, physicians and biomedicine were often criticised by 'anti-medicine' critics, (see for example Foucault, 1973; Illich, 1976; Sontag, 1978). However, the area of infectious diseases was different, a triumphant discourse, with victories over infectious disease seen as an unqualified success. Herzlich & Perret (1984) argue that by the 1980s cancer was the only 'real' disease worth talking about, 'THE illness of our time' (Herzlich & Perret, 1984 : 56).

The idea that by the 1970s cancer was 'the only real disease worth talking about' is supported by President Nixon's 'War on Cancer' of 1971 when

> Congress, the president, and the American people [were convinced] that science would win the war on cancer. From the outset, the war was geared toward finding a cure or at least a vaccine... The curative focus also reflected the unbridled optimism of the era: scientists had tamed the atom and banished polio; surely an all out assault on cancer could solve that problem, too. Nixon's 1971 declaration of war on cancer reflected a similar optimism, this time modelled on the Apollo moon shot. The nation that had landed a man on the moon could surely cure cancer.
>
> (Proctor, 1995: 265)

However, Nixon's 'War on Cancer' was largely unsuccessful. The US National Cancer Institute estimate that between 1971 and the mid 1990s, cancer survival rates in the US increased by only about 4% (Proctor, 1995).

As a result of the 'alleged conquest of infectious disease', in the 1970s the Communicable Disease Center, the main US resource for tackling infectious disease, changed its name to the Center for Disease Control (CDC), reflecting a new broader mission that included non-infectious diseases. In 1980, it became the Center for Disease Control and Prevention, reflecting its reorientation towards lifestyle and environmental issues. Through the 1980s the visibility and emphasis on infectious diseases generally decreased as the Center established divisions for Chronic Disease Prevention and Health Promotion in 1989, and for Injury Control and Prevention in 1992 (Berkelman & Freeman, 2004).

In sum, there is evidence from a number of sources to suggest that by the 1970s there was widespread and unquestioned optimism about the ability of biomedicine to 'conquer' infectious disease. These sources include, amongst others, medical textbooks (for example MacFarlane Burnet & White, 1972), histories of medicine (for example McNeill, 1976) and social scientific studies (for example Herzlich & Perret, 1984). Indeed, by 1980 nearly all deaths in the US and other similar countries were due to chronic disease, accidents, suicides and diseases of old age, including cancer. Reflecting this, only 34% of US National Institute of Health (NIH) resources were spent on the gamut of

problems that included infectious diseases. Given the mortality statistics of the time, this resource shift seemed entirely appropriate (Garrett, 1995).

1.3 'The Gathering Storm'

However, despite the apparent successes of biomedicine, even in the 1970s there were several new pathogens identified; pathogens which in the 1990s would retrospectively be classified as 'emerging' or 're-emerging infectious diseases'. This thesis examines contemporary media coverage of infectious diseases. What is therefore interesting about this period is that when these diseases appeared, although they did garner quite a lot of media coverage, they did not seem to affect the faith in the ability of biomedicine to 'conquer' infectious disease. Although the discourse around infectious diseases in the 1970s may have assumed that the age of infectious diseases was over, at that time there *were* several new infectious diseases, or old ones making reappearances. These new infections included: Lyme Disease, Ebola, Swine Flu, Legionnaires Disease, E coli 0157, hepatitis B, toxic shock syndrome, methicillin resistant *staphylococcus aureus* (MRSA) and genital herpes. Each of these diseases was reported as a discrete phenomenon at the time, although they were all later aggregated under the umbrella category of 'emerging infectious diseases'. As the three disease epidemics in this thesis are constituents of the same umbrella category (EID), and in various ways fit the criteria for being later regarded as 'emergent', these early epidemics bear some further examination.

In 1975 in Old Lyme Connecticut, about a dozen children suffering long bouts of fever and aching joints were diagnosed with juvenile rheumatoid arthritis. Many parents recalled the children having been bitten by a tick followed by a rash when the illness started. In 1981 the bacterium *Borrelia burgdorferi* was identified as the cause. Lyme disease increased twenty-fold over a decade to 10,000 cases in 1982. Lyme disease is not strictly speaking new, but is novel as an epidemic, caused by changes to the environment, namely reforestation of deforested areas and humans living in closer proximity to deer (Karlen, 1995). This phenomenon of human changes to the environment causing exposure to new pathogens from wild animals would later become one of the criteria for describing a disease as 'emerging'.

The Ebola virus was found to be the cause of haemorrhagic fever with high mortality around the Ebola and Zaire rivers in 1976 (Desselberger, 2000), although the outbreak went almost unnoticed in the West at the time. Again, it is particularly striking from the perspective of this thesis that when the disease re-appeared in Central Africa in 1995, the issue of 'far-flung' (what were by then called) 'emerging infectious diseases' was much more newsworthy. Press coverage of the 1995 outbreak is examined in detail in chapter 3 below.

However in 1976, news of the 'far-flung' Ebola epidemic was absorbed by two other stories of infectious diseases from America: Swine flu and Legionnaires Disease. The Swine flu story began in January 1976 when an army recruit from Fort Dix, New Jersey, died mysteriously from an influenza virus similar to one causing disease in swine. Testing revealed that another six of the Fort's 500

troops were infected with the virus. The US Center for Disease Control hastily decided that there had been a major antigenic shift and introduced a $135 million plan to inoculate every American.

Then, in August of that year, another new infection appeared in Philadelphia, amongst member of the American Legion, who had stayed at the same hotel. This news shocked the US Congress into approval of legislation waiving liability in the case of adverse events following vaccination and the *National Swine Flu Immunization Program 1976* was passed. Almost immediately there were reports of deaths of people shortly after being vaccinated against the new strain of influenza. Later, there were reports that within a month of being vaccinated some people had developed Guillain-Barre syndrome. The syndrome causes the body's immune system to attack part of the peripheral nervous system causing muscle weakness often serious enough to require artificial ventilation. By the end of 1976 there were 526 cases of severe adverse reactions, of which 257 had died. In the end 4181 legal cases were filed claiming damage from the vaccinations under the liability waiving law, which by 1993 had cost the US government nearly $93 million (Garrett, 1995). In the event, only 13 mild cases of influenza developed at Fort Dix and the strain was not found elsewhere (Levy & Fischetti, 2003). In the Legionnaires Disease outbreak, there were 221 cases who developed a type of pneumonia, of whom 34 died. In 1977 the CDC identified *Legionella pneumophilia* as the cause, which was spread by air-conditioning (Karlen, 1995).

What is interesting from the perspective of this thesis about the 1976 Swine flu epidemic (that didn't happen) is that while the infectious disease epidemics studied as part of this thesis are often framed or anchored onto past epidemics with high death tolls, particularly the 1918 'Spanish' flu epidemic, the 1976 Swine flu debacle is rarely invoked as a historical model. For example, post-SARS, disaster planners predict an influenza pandemic on the 1918 model and media reports frequently refer to the incidence and mortality figures of the 1918 epidemic. Yet those same media reports rarely, if ever, refer to the situation in 1976, particularly with regards to adverse events following influenza vaccinations.

Another infectious disease which was first classified in the 1970s was hepatitis B. This had been previously been thought to be an iatrogenic (introduced by medical treatment) disease caused by blood transfusion. However, in the late 1960s Baruch Blumberg discovered the so-called Australian antigen associated with the disease. A blood test was then developed to detect hepatitis B and it was discovered that it was the most widespread viral disease in the world, infecting millions of people, particularly in Asia and sub-Saharan Africa. In addition it was discovered that infection was highly associated with development of liver cancer, leading to an estimated one million deaths each year around the world. In 1982 a safe and effective vaccine was licensed, but hopes for an end to the epidemic were not realised as the vaccine had no effect on carriers. By the mid 1980s there had been a spectacular increase in hepatitis B, particularly amongst Western gay men, although the adoption of safer-sex practices offered protection against hepatitis B infection and subsequently

prevalence in this group fell (Muraskin, 1993). Hepatitis B, and more recently discovered strains of viral hepatitis such as hepatitis C, are blood borne diseases. For the most part they are caused by modern developments such as intravenous drug abuse, blood transfusions and the increase in anal sex and partner change associated with gay liberation in certain societies. As we will see below, viral hepatitis fits the 'emerging' criteria because these are relatively recent changes in human behaviour.

Another strand to the story of infectious diseases which was 'bubbling beneath the surface' of the apparent success of biomedicine in the 1970s was that of bacteria becoming resistant to antibiotics. The story of MRSA is recounted in detail in chapter 7, but as early as the end of the 1960s there were methicillin resistant strains of *staphylococcus aureus* in New York and parts of Canada, Europe and Africa. By 1980 MRSA had spread throughout the world. In January 1980, the US Center for Disease Control was informed of a sudden surge in Toxic Shock Syndrome, women infected with *staphylococcus aureus* toxin that was resistant to the entire class of penicillin antibiotics (Garrett, 1995). The cause was soon identified as tampon use, but the story generated a great deal of media coverage around 1980, as did the rise in genital herpes, which between 1966 and 1981 had increased nine-fold in the US, and prompted a moral panic. By 1986 in key US cities, levels of genital herpes (HSV-II) had reached 60% of all adult men. British cases rose from 4000 a year in 1970 to 20,000 in 1984 (Garrett, 1995). Finally, in Oregon in 1982, a new strain of *Escherichia coli* (*E coli* 0157:H7) was first identified that can cause haemolytic ureamic syndrome and is potentially fatal (Levy & Fischetti,

2003). This strain caused major fatal food poisoning outbreaks in the US and Britain in subsequent years.

If the gathering storm of new infectious diseases through the 1970s heralded the beginning of the end of the so-called *golden age of medicine,* then the end of the age of optimism around infectious diseases can be more precisely dated to June 5th 1981. On that day, the US Morbidity and Mortality Report described of a cluster of cases of young homosexual men, all with widespread immunodeficiency without apparent reason (Gottlieb et al., 1981). The US Center for Disease Control started a nation-wide surveillance programme in July 1981. Although epidemiological evidence pointed to an infectious cause from the outset, it is interesting in light of the discussion above about the importance of cancer in the period that the new disease was originally termed 'gay cancer'. In fact the very first mainstream newspaper article about AIDS in *The New York Native* of July 27, 1981 was headlined 'Cancer in the Gay Community' (Mass, 2004). The 'gay cancer' label was soon changed to Gay Related Immune Deficiency (GRID) and later again to Acquired Immune Deficiency Syndrome (AIDS). In May 1983, Dr Luc Montagnier discovered the virus that caused AIDS, which he called *lymphadenopathy associated virus* (LAV). Dr Robert Gallo at the US National Cancer Institute claimed the discovery, which he called HTLVIII, as his own. Later, the term *human immunodeficiency virus* (HIV) was coined, and in March 1985 the first HIV antibody test was released (Shilts, 1987).

The way that the unfolding AIDS epidemic was covered in the media will be examined in detail in chapter 3. It took many months, years even, before the implications of this new epidemic penetrated the collective consciousness. The AIDS epidemic contradicted the prevailing paradigm of the diminished importance of infectious diseases. The emergence of this disease as an infectious one may even have contributed to the initial difficulty in its being accepted as a serious public health threat (Berkelman & Freeman, 2004). The optimism of the 1970s was shattered. There was now a new infection, which was apparently inevitably fatal, was sexually transmitted, and for which biomedicine could offer no vaccine and no cure.

In sum, in the decade before the appearance of AIDS in the early 1980s, there were a number of new infectious diseases. What is striking about these diseases for the purposes of this thesis is that they did not seem to dent the faith that biomedicine could be relied upon to provide a cure. In particular we might contrast the way that infectious diseases were covered by the media in the 1970s to the way that the diseases examined in this thesis were predicted to be 'a rehearsal for the big one', a result of 'interfering with nature' or as heralding a return to a pre-antibiotic age. If anything, the pre-AIDS era infectious diseases such as Legionnaires disease and Toxic Shock Syndrome seemed by contrast to reinforce the notion that as new diseases appeared, biomedicine would be able to provide a solution to them (Berkelman & Freeman, 2004). As we will see in chapter 3, in contrast to the widespread reporting of diseases that killed relatively few people such as Legionnaire's Disease, ironically AIDS was initially not considered newsworthy.

1.4 An emerging discourse

What we see from the end of the 1980s and through the 1990s is the reclassification of many of the new infectious diseases described above that had made their first appearance in the 1970s. A new category of 'Emerging Infectious Diseases' was defined. However, the players behind the creation of the new category were less driven by the threat of distant diseases such as Ebola, or even of the unfolding AIDS epidemic. Their concern was with the dismantling and under-funding of the US public health infrastructure in relation to infectious disease, which was by then beginning to cause old diseases such as tuberculosis to re-emerge in certain US cities. This section will examine the 'emergence' of this new strand of biomedical discourse, and the 'discipline-building' that surrounded it.

One of the important drivers behind the creation of the new EID paradigm was the epidemic of tuberculosis that struck New York City and several other major US inner cities in the early 1990s. Tuberculosis had all but disappeared in the US by the 1970s, and as a result between 1965 and 1989 tuberculosis control was dismantled. In 1972 tuberculosis project grants were replaced by general federal grants and local governments began to shift funds to other purposes. In the early 1970s, 13 of New York's 21 tuberculosis clinics closed, and in the mid 1970s the city's fiscal crisis led to health department staffing being cut by a quarter, which also badly affected tuberculosis control. Because of the triumphalism around infectious diseases, in 1968 the National Tuberculosis

Association had changed its name to the National Tuberculosis and Respiratory Disease Association. The number of new research grants for the disease had dropped significantly by 1979. Compared to cancer and heart disease research, tuberculosis lacked prestige in the medical world. At the same time, on a federal level, in 1981 the newly elected President Reagan called for a cut of 25% in authorisations for health programmes including all those implemented through the Center for Disease Control and National Institutes of Health. Through the 1980s, the Republican administrations maintained pressure to constrain budget requests (Smith-Nonini, 2004).

The incidence of tuberculosis in New York City had been rising again gradually each year after 1978, but this was widely blamed in the medical literature on patients' failings (non-compliance) rather than on structural causes such as poverty or the actual functioning of the health services. Although many new patients started to be diagnosed, they were treated as 'curios', examples of a disease that had disappeared (Smith-Nonini, 2004). Between 1990 and 1993 tuberculosis reached epidemic levels in New York City. Many of the new cases were drug-resistant strains of the disease. Multi Drug Resistant Tuberculosis (MDRTB) represented a new public health threat because of the difficulty in treating these cases. The discovery in 1991 of spreading MDRTB served as a catalyst, forcing restructuring of the health bureaucracy and new funding to tuberculosis programmes, as MDRTB cost 20 times more to treat than ordinary tuberculosis, and the cost to New York City ran into millions of dollars. Yet even after 1990, when the New York City authorities announced a dramatic rise in tuberculosis cases, the Bush administration cut the Center for Disease

Control's tuberculosis control budget from $36 to $8 million (Smith-Nonini, 2004).

On May 1st 1989, the US National Institutes of Health and Rockefeller University co-sponsored a conference on 'emerging viruses' a term coined by the chair, Stephen S Morse, in order to discuss concerns about the appearance of these new infectious organisms such as HIV and Ebola. The conference spurred the formation of an Institute of Medicine committee on 'emerging infectious diseases'. The term thus modified acted as an umbrella which would include underlying concerns about the development of antibiotic resistant strains of bacteria such as MRSA and MDRTB, the spread of which was due partly to of the dismantling of the public health infrastructure (King, 2002). Three years later, the National Academy of Science's Institute of Medicine (IOM) published *Emerging Infections: Microbial Threats to Health in the United States* (Lederberg, et al., 1992), the most comprehensive and widely cited statement of the emerging diseases paradigm.

The IOM report defines an 'emerging infection' thus:

> Emerging infectious diseases are clinically distinct conditions whose incidence in humans has increased... the committee has focused on diseases that have emerged in the United States within the past two decades. Emergence may be due to the introduction of a new agent, to the recognition of an existing disease that has gone undetected, or to a change in the environment that provides an epidemiologic 'bridge'... Emergence, or more specifically, re-

> emergence, may also be used to describe the reappearance of a known disease after a decline in incidence.
>
> (Lederberg et al., 1992): 34)

There are several points to be made about this definition: The first is that the focus clearly is on diseases that threaten the US. This concept of EID as a threat to US interests or US citizens was to become crucial following the terrorist attacks against America on 9/11, when EID were recast as a threat to *American security.* For example, following 9/11 and the series of cases of anthrax spores sent through the US post, the topic of bioterrorism was often conflated with the 9/11 terrorist attacks, even though they were separate events (King, 2003).

Another salient point to make about this definition of EID is that the pathogens included in the definition are not linked by any medical or scientific taxonomy but by whether cases of the diseases are increasing or have appeared in a geographically novel place or in a population previously naïve to them. Thus the category could potentially include *any infection which is increasing (in the US) or which threatens the US.* In the 1995 first edition of the journal *Emerging Infectious Diseases,* a wider definition of the term is formulated, this time less (blatantly) America-centric: '"Emerging" infections can be defined as infections that have newly appeared in a population or have existed but are rapidly increasing in incidence or geographic range' (Morse, 1995: 7).

The full list of 'Emerging Infectious Diseases' up to 1999 is reproduced in Appendix (i). Some of these diseases, such as AIDS or Brazilian purpuric fever, could be regarded as genuinely new. Others, such as Hantaan viruses, had been known in Asia for centuries but were spreading beyond that continent. Similarly, hemorrhagic fevers such as Ebola were described long ago. Others that fell under the category of 'emerging' were ancient but had changed in certain respects, such as tuberculosis or group A streptococcal infections, which caused scarlet fever but were now also causing *necrotising fascitiis,* so-called 'flesh eating bacteria'. What 'emerging' means in this particular context is 'emerging from the poor', particularly the poor in the developing world (Farmer, 1999).

The category 'Emerging Infectious Diseases' thus gathers together a whole range of clinically distinct infections, caused by a range of different types of pathogens. The IOM report acknowledges this when it states: 'Rather than categorize emerging microbial threats by type of agent – viral, bacterial, protozoal, helminthic, or fungal – this report classifies emerging threats according to the factors related to their emergence: Human demographics and behaviour; Technology and industry; Economic development and land use; International travel and commerce; Microbial adaptation and change; Breakdown of public health measures' (Lederberg et al., 1992: 47). The list has been extended by later authors to include amongst others: global warming, dam building, travel, war, poverty and malnutrition, increased numbers of refugees and internally displaced persons and increased numbers of older persons (Louria, 2000; Morse, 1995).

This list of factors responsible for disease emergence has been characterised as 'a list which was in many ways a wholesale condemnation of the consequences of modernity' (King, 2002: 768). As we will see below, the concept of infectious diseases emerging as a result of changes associated with modernity (Morse, 1995) resembles the anti-modernist sentiment of Beck's (1986) *Risk Society* thesis, as outlined in the next chapter. The EID paradigm points to the risk posed by human disruption of natural ecosystems. For example, by introducing modern agricultural or industrial technologies in a particular location, 'local' causes might produce a 'global' effect such as a disease pandemic (King, 2004). Unlike Beck however, Morse, Lederberg and others writing from within the EID paradigm identify science and technology (in this case biomedicine) as the solution to the problem, as well as its cause.

The IOM report became the centrepiece of a major public health campaign. In 1995, the meeting of the New York Academy of Medicine and the annual meeting of the Institute of Medicine were devoted to the topic, the US Center for Disease Control launched a journal *Emerging Infectious Diseases*, and the World Health Organisation established a *Division of Emerging and Other Communicable Diseases Surveillance and Control,* making the issue a central part of its global strategy. In 1996, 36 medical journals in 21 countries devoted all or part of their issues to emerging diseases. By the end of the decade, the campaign had been accepted in many US government agencies and international health organisations. A 1998 Center for Disease Control report

closely followed the IOM report's recommendations which it identified as the 'source of a new consensus' (King, 2004).

The IOM report thus marks the 'emergence' of a new strand of biomedical discourse, and in the years following the report, a broad campaign of 'discipline building' ensued: other reports and publications reiterated the themes of the original report; a journal devoted to the topic was established; conferences were held; existing institutions were persuaded to adopt its framework of risk and response; independent institutes were developed and funding streams established (King, 2004). These activities were often announced and accompanied by press releases, providing the mass media with 'pseudo-events' worthy of coverage in their own right. US government scientists from the Center for Disease Control involved with infectious diseases were trained to work with the media. They made special efforts to work with news reporters and science writers, responding to press inquiries more fully than had been customary and coaxing journalistic interest in the topic (Berkelman & Freeman, 2004).

Thus emerging diseases became an object of mass media interest and cultural production. Journalists were able to characterise individual outbreaks as incidents of global significance. The media coverage of individual diseases was couched in the new scientific language of 'emerging' and 're-emerging' infections. This created the perception in the reportage that the subject was new and important. By aggregating the individual and distinct diseases in this way,

'the problem' grew to be a pressing political concern warranting decisive political intervention and funding (Berkelman et al., 2004).

In parallel to the 'discipline building' around EID within the scientific and biomedical community, there was an increased interest at a societal level in the phenomenon of EID. Numerous popular science books conveyed the apparent threat of EID to a wider public. Of particular note were Laurie Garrett's *The Coming Plague* (Garrett, 1995) and Richard Preston's *The Hot Zone* (Preston, 1994) which were both released around the same time as the IOM report. Both writers were speaking publicly on the issue of EID and were informed of the Center for Disease Control's plan for EID by US scientists. Both were openly supportive in the media of the US government's efforts to promote the EID paradigm (Berkelman & Freeman, 2004). Thus through popular science books, and through the news reportage the concept of EID passed from the sphere of scientific conferences and journals to the domain of lay knowledge or 'common sense' via the mass media.

In sum, from 1989 to 1995 there was the creation of a new strand of biomedical discourse: 'emerging infectious diseases'. The category included a variety of different diseases, with distinct aetiologies and clinical features, but was linked by the idea that the causes of the 'emergence' of these infections into countries like the US were linked to modernity. The consequences of modernity that were thought to be at the root of the problem were: mass migration and travel; environmental and behavioural changes; and particularly the breakdown of the public health infrastructure, largely as a result of the apparent successes of

biomedicine in the field of infectious diseases. Although the promoters of the EID paradigm used the newsworthiness of diseases such as HIV and Ebola to attract attention, arguably the authors of the IOM report were just as concerned with developments such as antibiotic resistant strains of bacteria as a result of the neglect of public health in the 1970s.

Conclusion

In light of the apparent success of biomedicine in reducing mortality rates from infectious diseases up until the 1970s, there was an increasing optimism in scientific and lay circles that infectious diseases could be 'conquered'. Although several new infectious diseases were reported in the 1970s, these do not seem to have dented this optimism. By the late 1980s the appearance of AIDS and concerns about the breakdown of public health measures led to a fundamental sea-change in both scientific and lay opinion as to the future of infectious disease. A new umbrella term 'emerging infectious diseases' was coined in 1989 and since the 1990s has gained increasing currency as a biomedical discipline.

In parallel with the increased interest in infectious diseases in biomedical and scientific circles there has been an increased interest in the phenomenon from the mass media. From the perspective of the general public(s) from the late 1980s the media were increasingly focussed on the threat posed by the new disease AIDS. When the new discourse around EID began to be disseminated beyond the scientific world, the EID category was anchored onto the concern

about AIDS. As any new story concerning an infectious disease appeared, the mass media formed social constructions of each novel disease threat which were framed within the novel EID paradigm. These constructions enter into everyday consciousness and language and become 'common sense'. There seems rarely a moment when EID are *not* headline news: as one disease scare or media panic passes another seems to take its place. For example, before the 1995 British general election, MRSA was highly politicised and newsworthy. Yet soon after the election its newsworthiness waned, to be replaced for a while by avian influenza as headline news. As each of these disease scares follows the last, there is an increasing pitch to the risk discourse, a sense of something worse around the corner – this could be the 'next big thing' – in both the medical discourse and the subsequent media representation.

Beyond the biomedical and epidemiological *realist* account of people infected and suffering with each new disease, there is a media scare related to the realist account that is a social construction of that disease. As each new threat forms its representations in the consciousness of the public(s), that social construction does not drop into a vacuum but rather into a rich metaphorical landscape, already full of cultural resonance and reference, with a variety of existing templates and archetypes. As well as the new epidemic being constructed in terms of existing historical, cultural and narrative templates and archetypes, it is also re-represented and reinterpreted in light of contemporary concerns, for example, concerns about globalisation or the role and use of technology, about the production of food, or about medical technology such as antibiotics.

This thesis will look at the *meanings* of these 'emerging infectious diseases' as represented in the British mass media. It will also cast light on what insights the increased focus on infectious diseases in the post-industrial era can give us about wider concerns, in particular concerns about globalisation and its attendant issues of mass migration and economic changes such as the growing power of China.

The next chapter will map out the theoretical framework of this thesis, by discussing the various ways in which risk is important in the social sciences. The discussion of risk leads us to a consideration of the role of blame in the reactions to new infectious diseases. Finally, the following chapter will discuss Social Representations Theory and why it is useful in this context to examine the media coverage of a phenomenon like emerging infectious diseases.

Chapter 2 – The Theoretical Framework

> Of the different types of blaming system that we can find in tribal society, the one we are in now is almost ready to treat every death as chargeable to someone's account, every accident as caused by someone's criminal negligence, every sickness a threatened prosecution. Whose fault? is the first question. Then, what action? Which means? What damages? What compensation?
>
> *Risk and Blame* (Douglas, 1992: 15-16)

Risk is a major theme in contemporary social science, and discussions of risk span many different social scientific disciplines and theoretical approaches. This chapter will begin by outlining the different theoretical approaches to risk, before focusing on two theorists whose work will be fundamental to this thesis, namely Beck's *Risk Society* thesis and Douglas' work on risk and blame. For Douglas, questions of risk function to apportion blame. Joffe builds on this notion from within the framework of Social Representations Theory (SRT) and brings Douglas' and Beck's ideas together with the literature on *othering*. This chapter will sketch out the principle features of social representations theory and look at representations of illness and disease, areas where the theory has been particularly fertile, and which are particularly relevant to this thesis. Finally, as media coverage of EID is often framed in terms of binary oppositions of self and *other,* the chapter will end with a discussion of the concept of the *other* and its roots.

2.1 Models of risk

There are several distinct models of risk used in the social sciences, which following Lupton (1999b), can be characterised as *realist*, *strong constructionist* and *weak constructionist.* The first model of risk can be characterised as the *realist* model (Lupton, 1999b), in which risk is seen as an objective hazard, threat or danger that exists 'out there'. Although the *realist* model proponents would acknowledge that risk may be distorted through social or cultural interpretations, they would argue that the risk can still be measured independently of social or cultural forces (Lupton, 1999b). In the techno-scientific literature, which is steeped in the realist position, there is often a thinly disguised contempt for lay people's unscientific, 'incorrect' knowledge about risk (see for example Gigerenzer, 2002). The calculations the 'expert' provides about risk tend to be treated as if they were value-free, unbiased 'objective' facts.

Much of the social scientific literature on risk perception inherits this starting point and sets out to 'test' perceptions of risk, for example through surveys and questionnaires. Risk perceptions are then seen from this individualist perspective as being 'faulty' or 'deficient' if they do not corroborate with an expert analysis of that risk. This type of research often starts and ends with the assumption that if people were more educated about particular risks then they would behave differently, and the general public and the expert assessments of risk would converge. Recently, there has been a shift away from this 'deficit model', from notions of *public understanding of science* to a notion of *public engagement with science* (see for example Durant et al., 1992; Evans &

Durant, 1995). This shift towards a contextual model in 'public understanding of science' refers to understandings of and engagement with science and technology more generally, although the same point can be made in relation to risk.

One criticism made of this *realist* risk perspective is that it seems to posit risk assessments as being made solely on an individual basis, and underplays the role of influence from the wider culture. This critique argues that individuals do not weigh up a particular risk and then decide to avoid it, but that the risk avoidance is built into the routines and habitual behaviours of their everyday lives and strongly influenced by their membership of social groupings. The problem with this *realist* perspective then is that it treats science and risk as though they were independent of socio-cultural influences and effects. This is true both of those calculating the risk and framing the assumptions and of those perceiving the risk.

This concern is taken up in various ways by those who argue that risk is socially constructed. One strand of social constructionism, the *strong constructionist* (Lupton, 1999b) model of risk, stands diametrically opposed to the *realist* model. This *strong constructionist* model derives in part from the work of Foucault. It argues that the discourses, practices and institutions around a phenomenon such as risk serve to bring the risk into being, to construct it as a phenomenon. From this perspective, nothing is a risk in itself. Rather, what we understand to be a 'risk' (a hazard, threat or danger) is a product of historically, socially and politically contingent 'ways of seeing'.

This model thus focuses on how discourses construct notions of realities, meanings and understanding. For the *strong constructionists*, the role of expert opinion is to provide the advice and guidelines by which people are surveyed, compared against norms, trained and rendered productive. Discourses of risk are thus a way of regulating populations and individuals. Through the efforts of statisticians, epidemiologists, lawyers etc, people are identified as being 'at risk', and requiring particular forms of interventions.

Whilst this *strong constructionist* model of risk has been used in various ways to critique medicine, the media discourse around coverage of EID tends to be framed by social scientific writers in terms of another strand of social constructionism. This can be characterised as the *weak constructionist* (Lupton, 1999b) model of risk. Rather than arguing that there is no 'objective' reality to discourses of risk, this position sees risk as an objective hazard, threat or danger, but one that is inevitably mediated though social and cultural processes and cannot be known in isolation from them. Unlike the *strong constructionists*, these writers are not arguing about the realities of the risks we may face, but instead focus on how they are politicised and what meanings are attributed to them. One strand of this *weak constructionist* model is the *critical structuralist* approach of *Risk Society* theorists like Anthony Giddens and Ulrich Beck. The second strand of the *weak constructionist* literature draws on the work of the cultural anthropologist Mary Douglas (*functional structuralist* approach). It is in this *weak constructionist* tradition that we might 'locate' Social Representations Theory.

Chapter 1 described how the 'emergence' of various infectious diseases was connected to certain *realist* factors in the recent history of biomedicine. The chapter then identified how the new EID paradigm was socially constructed as a new discourse or discipline. The theoretical positioning of this thesis is therefore not that of the *realist* position, insofar as the last chapter argued that the optimism surrounding infectious diseases was only partly warranted by the *realist* successes of biomedicine. Indeed, diseases later described as 'emerging' had been an increasing problem for many years before the new category was constructed. Neither is this thesis arguing the *strong constructionist* position that the creation of the new category served to bring the risk of certain new infectious diseases into being, unconnected to the reality of human beings suffering from those conditions. Rather, this thesis will argue the weaker position that the reality of the new diseases created social constructions of those diseases, where they became politicised and where meanings were attributed to new infectious diseases (for example, EID are often blamed on 'interfering with nature') beyond the biomedical reality but not unconnected to it. These social constructions are worthy of study for the insights they give us into contemporary post-industrial society. This is the subject of this thesis.

In sum, risk is an important theme in contemporary social science, and several different approaches have been used to try to explain the concept. These range on a spectrum from a perspective which views the techno-scientific quantification of risk as 'correct' and bemoans 'incorrect' public understandings of various risks to theorists who argue that risks do not exist, but are (purely) constructions that serve political ends and serve to control the

behaviour of individuals. Between these two extremes are theorists such as Beck and Douglas, whose work will be used to inform the empirical chapters of this thesis. These two strands of *weak constructionism* are particularly fruitful as means to unpack the meanings of EID. Therefore, I will start by outlining the *Risk Society* thesis and its critics.

2.2 The Risk Society

If risk is one of the most important themes in contemporary social science, then the German sociologist Ulrich Beck, who coined the term the *Risk Society,* is arguably the most important theorist in this field. Risk society theorists such as Beck and Anthony Giddens argue that in late industrial society, there is a process of individualization and breaking down of traditional norms and values. Giddens' (1991) interest is in contemporary social change and its impact on the self. He argues that contemporary societies are a clear continuation of modern transitions and cultural developments, what he calls 'late modernity'. One of the features of late modernity is that individuals are surrounded by doubt and change. Whereas in traditional societies people might expect to blindly follow a role or identity marked out for them, in late modern societies, they are engaged in reflexive construction of the self. Giddens draws particular attention to the links between the mission to construct the self and the rise of a *Risk Society.*

Beck's (1986, 1998, 2006) work is rooted in the political tradition of the West German Green movement and has been characterised as distinctly German,

presuming a degree of wealth and security typical of post-war Germany and German national identity (Beck, 1998). His central point is that in late modernity the *quality* of risks we face are different in comparison with the risks faced by our ancestors in rural societies or in the early industrial age. For Beck, the *Risk Society* is not a post-modern phenomenon, in the sense that it does not mark a radical break with modernity, but rather the world of the *Risk Society* marks the development of earlier modernity into a *more* modern world. 'It is not the crisis, but the *victory* of modernity, which through the logics of unintended and unknown side-effects undermines the basic institutions of first modernity' (Beck, 2006: 10).

For Beck, in-pre modern societies, risks were the result of extra-societal forces like earthquakes or the weather. In nineteenth or early twentieth century industrialised societies, factory related or occupational hazards were limited to certain localities or groups. However, in contemporary society the risks we face are themselves produced by society, or more specifically by science and technology, which in themselves are also the judges of the safety of those risks. These new types of late modernity *Risk Society* risks are characterised by three features. The first is that risks are unbounded and de-localised in that their causes and consequences are not limited to one geographical location or space. This takes place on the spatial level, insofar as new risks such as climate change do not respect borders; it takes place on the temporal level, in that the new risks have a long latency period; and on the social level, in that thanks to the length of chains of effect, assignment of consequences and causes is no longer possible, for example in financial crises. The second feature that

characterises these new *kinds* of risk is their incalculability: the consequences of these risks could be gauged based on scientific estimates. Finally, the third feature of these new kinds of risks is that that the consequences of the new threats to humanity are such that the logic of making the dangers more controllable through compensation breaks down. For example, the potential consequences of developments in human genetics are deemed to be so catastrophic that precaution is achieved only through prevention of the use of the new technology (Beck, 2006).

Beck's *Risk Society* thesis is often taken to be referring to environmental catastrophes, for example the accidents at Windscale in Britain in 1957; Three Mile Island in the United States in 1979; and Chernobyl in the Ukraine in 1986; as well as chemical hazards from large scale disasters such as that at Bhopal in India in 1984 (Irwin, 2001). However, this is a widely held misreading of Beck's position. Beck's conception of *Risk Society* does *not* mean catastrophe; risk, for Beck, means the *anticipation* of catastrophe. Indeed, once the anticipated risks become real, they cease to be risks and become catastrophes. Risks in the Beckian sense then move elsewhere. So for example once an anticipated terrorist attack actually happens, then new concerns come into focus: about the use of new tactics such as bioterrorism, the effect of the attack on markets and so on.

> Risks are always events that are threatening. Without techniques of visualisation, without symbolic forms, without mass media etc, risks are nothing at all. In other words, it is irrelevant, whether we live in a world which is in fact or in some sense 'objectively' safer

> than all other worlds; if destruction and disasters are anticipated, then that produces a compulsion to act.
>
> (Beck, 2006: 4)

So for Beck, and perhaps to a lesser extent for Giddens, whose outlook is generally more positive, risk and uncertainty arise from the realisation that the certainties and hopes of the utopian project of modernity, with its attendant process of globalisation, are not being realised. It is in this context that this thesis will examine the newspaper coverage of new infectious diseases. One research question of this thesis relates to risk: does the media coverage of the risk of EID highlight such wider contemporary public anxieties, in particular anxieties *both* about the apparent inability of technology (and biomedicine) to contain new threats *and* concerns about globalisation?

Globalisation can mean many things: it is for many the worldwide spread of information, lifestyles, culture, and technologies. Globalisation can be thought of as a process involving three key dimensions: economic globalisation associated with the rise of world finance markets, free trade zones and trans-national corporations; political globalisation, or the way the nation state is being superseded by organisations such as the United Nations and the European Union; finally cultural globalisation, the flow of information, symbols etc around the world that is usually characterised as 'Americanisation' or 'McDonaldization' (Smith, 2001). However, for many commentators, globalisation is primarily an economic force, implying that (nearly) all national

economies are now networked with other economies around the world (Beck, 2000).

One of the consequences of economic globalisation and the weakening of the nation state is greater mobility of people. Those with sought after job skills move to where they can make the most of them, and the poor move to where 'milk and honey beckon' (Beck, 2000). Another consequence of economic globalisation is the global flow of information attendant on innovations such as the Internet and 24-hour news services like CNN, BBC World and Al-jazeera. This thesis will examine whether this flow of information functions to make distant events seem local and more immediate and leads to a greater awareness of the threat of global epidemics of infectious disease.

One criticism of Beck's *Risk Society* thesis is that he does not make much effort to consider the validity of his theory in relation to existing empirical research on social / media perceptions of risk, which points to a considerably more complex and obscure picture than Beck's theory would allow (Wilkinson, 2001).

> [D]espite the considerable analytical investment which Beck makes into the alleged role of the mass media in 'sounding the alarm' about the reality of hazards... [s]o far Beck has made very little attempt to engage with the literature of communication research, and further, he appears to be largely unaware of the difficulty of theorizing the effects of mass media in light of the discovery of audience studies.

(Wilkinson, 2001: 12)

Fleshing out this point, some critics (see for example Kitzinger & Reilly, 1997) have argued that although several empirical studies suggest that the media pay increasing attention to scientific uncertainty and are instrumental in raising concerns about particular threats, at times the media also offers reassurance rather than emphasising risk. Research also shows that the selection of risks reported in the media does not reflect either the seriousness of the risk or the incidence figures of those affected by it (Kitzinger & Reilly, 1997).

Kitzinger & Reilly (1997) examine *which* risks attract public attention and why the media pick up (and then drop) a particular 'risk' issue. They conclude that the media are not simply reflecting a 'new epoch' (a la Beck) nor are they indiscriminately attracted to risk. Amongst the factors that influence the news media's attention to risks are: journalists' knowledge, (some journalists shy away from stories where they have difficulty understanding the issues); news values and the need for 'real events' to serve as news hooks; the human interest factor (what they call the 'it could be you / it could be me' factor); the self-referential media momentum – where once a story becomes newsworthy, other media outlets start to address it; and the amount of associated activity by pressure groups, professional bodies, politicians etc. (Kitzinger & Reilly, 1997).

Despite these criticisms around not engaging with the empirical literature on risk perception, Beck's framework nevertheless forms a useful starting point in the analysis of public engagement with EID. As Beck is ideologically rooted in

the Green political perspective, his major concern is with environmental risks. Although not orientated towards health issues in particular, his hypothesis concerning the impact of contemporary risks on public emotions may be pertinent to EID. This thesis will examine media coverage of EID in light of his theoretical framework. Certainly some EID would seem to fit the environmental model of the *Risk Society* thesis, in particular EID such as 'mad cow disease' seem to be a type of risk that fits Beck's thesis well.

Antibiotic resistant strains of bacteria would also seem on the face of it to fit with certain aspects of Beck's *Risk Society* thesis. The phenomenon is caused by the misuse or overuse of a technology, in this case antibiotics, which is a major causal factor leading to MRSA. MRSA seems to be a risk on Beck's model, in that the danger is invisible, or unknowable, and unbounded, in the sense that the long-term danger posed by the predicted end of the antibiotic age may reverberate through the generations. Therefore one of the questions for the empirical work of this thesis will be to see whether MRSA may fit with Beck's criteria for a post-industrial risk, insofar as MRSA may produce high levels of anxiety.

Apart from the cases of 'mad cow disease' and MRSA, elements of the media coverage of other EID also perhaps would resonate with aspects of Beck's *Risk Society* thesis. For example SARS may fit his criteria for a post-industrial risk and its potential for raising anxiety because of the way coverage of SARS by the news media, as well as the actual cases of SARS, were 'globalised'. The ability of air travel to spread the virus around the world means that the risk

could not have been contained locally on the quarantine model of Ebola. Thus its effects were felt in a global sense, not least of which were the effects on the global economy. However, although SARS is a '*newly* emerging infectious disease', infectious diseases have been a risk to humans throughout history and can hardly be described as part of the condition of late modernity. Therefore one of the other questions for this research relates to whether or to what extent Beck's thesis is pertinent to the case of an EID like SARS.

Beck's *Risk Society* thesis would argue that in contemporary society we are surrounded by risks, by which he means the anticipation of catastrophes or dangers. These risks are a particular feature of post-industrial society. For him, these are different in quality from the risks faced by people in pre-modern societies both in that they themselves are the products of modernity, and that they are unbounded temporally or spatially. This thesis will examine the media coverage of EID to see to what extent they fit this type of model.

2.3 Risk and Blame

Another strand of a *weak constructionist* risk model follows the work of cultural / symbolic theorists such as the English cultural anthropologist Mary Douglas. Douglas (1992) argues that the risks we face in 'modern' societies, or at least the 'modern' reactions to those risks, are precisely the same as those that can be found in what she calls 'primitive' societies. In recent years, Douglas' later work on environment and risk has attracted renewed attention thanks to the increased interest in the *Risk Society.*

Douglas' position holds that ideas about risk are constructed both through individual experience, for example 'my grandfather smoked all his life and died at 90' and by the mass media, as well as by the voices of experts like health professionals. Douglas tries to address the question of why some risks are highlighted more than others, unrelated to their 'objective' seriousness, quantified in terms of numbers of deaths associated with the risk. Douglas' work is located within a Durkheimian tradition of epistemology, which argues that the cultural value of collective representations of real or impending disaster is that they *function* to maintain group unity. In an effort to protect themselves from a perceived danger, people are supplied with a common set of aims and objectives. In addition, by identifying either outsiders (or less commonly 'our leaders') as the cause of the threat, people are provided with a shared outlet for their anxieties through casting the blame upon those who are identified as threatening to disrupt their way of life. She focuses on how notions of risk are used to maintain conceptual boundaries between self and *other* and emphasises the political use of the concept of risk to attribute blame for a danger that threatens a particular social group.

For Douglas, the same blaming mechanisms are evident when we 'moderns' are faced with a new threat as were evident in so-called 'primitive' societies. When a new disease appears, boundaries are constructed between self and *other* which function to apportion blame. Therefore the people in the category of *other* are seen as responsible for the genesis of the disease; and / or for 'bringing it on themselves'; and / or spreading it, because they are portrayed

for example as dirty, because they eat disgusting food, have bizarre rituals and customs, or because they are sexually perverted or promiscuous (Douglas, 1992). Representations of risk for Douglas thus perform an important *integrative function* in the maintenance of social solidarity (Wilkinson, 2001).

For Douglas, the response to risk can be seen as a strategy for dealing with danger and *otherness*. Modern secular opinion sees 'primitive' society as dominated by superstition, giving religious explanations to natural events. For example, disease epidemics and other misfortunes such as floods, earthquakes and accidents were thought to be the result of sin or of the breaking of a taboo. Thus nature for 'primitive' societies is heavily politicised. By contrast, modern secular opinion would like to think that modern society sees nature as morally neutral. If this were the case, we 'moderns' should know about the risks we face as direct knowledge, bare reality, different from 'the clouded superstitions of the past'. For modern secular opinion (as exemplified by the *realist* model of risk), risk provides a rational, scientific, calculable explanation for misfortune.

Douglas argues the contrary position: that in contemporary Western societies, blame must similarly be attributed to every death, every accident and misfortune. She argues that the notion of risk in modern secular societies does the work of 'sin' which functioned to explain misfortune in pre-modern religious societies. Thus our modern, secular 'enlightened' view would argue for example that AIDS is not the result of sin but is the result of 'risky behaviour'.

> On this subject we shall show that there is not much difference between modern times and ages past. They politicised nature by inventing mysterious connections between moral transgressions and natural disasters as well as by their selection among dangers. We moderns can do a lot of politicizing merely by our selection of dangers.
>
> (Douglas & Wildavsky, 1982: 30)

Like Beck, in his *Risk Society* thesis, Douglas also sees the pre-eminence of risk at this point in history as connected to globalisation, as people feel that they are more interconnected and therefore more vulnerable than they previously were. However, she cautions suspicion of environmentalists who focus on the perceived threat of an anticipated environmental catastrophe. For her, this apocalyptic scenario functions as a device for casting blame on *others*, who may be identified as a threat to 'us' or to our livelihoods (Wilkinson, 2001).

Like Beck, Douglas has been criticised by those who point to the empirical evidence on risk perception gathered over the past twenty years, and in light of which neither Douglas nor Beck has made much effort to validate their theories. Critics argue that the appeal of both Beck and Douglas' theories lies more in their polemical functions than in the extent to which they have clear and empirically supported notions of how the public acquire and interpret 'hazards' as risks (Wilkinson, 2001). The research reported in this thesis will

contribute to this debate by framing the empirical study of the newspaper reporting in light of Beck and Douglas' theories.

Apart from Douglas' later work on risk and blame, elements of her early writings about pollution are also pertinent to this thesis. She argues in *Purity and Danger* (Douglas, 1966) that ideas of purity and pollution are central to cultural life. Things that did not fit into the orthodox classification systems were seen as polluted as they crossed or violated symbolic borders. For example, the Old Testament prohibition against eating shellfish has its roots in the classification of fish as creatures with scales. As shellfish did not have scales they were seen as violating the orthodox classification of 'fish' and thus were to be avoided as polluted. Thus, she draws attention to the systemic non-random nature of cultural beliefs about pollution, claiming that they can only be understood in terms of the context of wider classifications, thus providing a systematic and generalisable Durkheimian model of culture and society (Smith, 2001).

Similarly, for Douglas dirt represents disorder – physical, moral and political – and hygiene rituals symbolically restore order. This applies to both modern and 'primitive' cultures. However, there are certain differences: for example, modern ideas of dirt and hygiene and thus the modern bases of dirt avoidance are supposedly based on knowledge of pathogenic organisms, which stems from the advances in bacteriology around the end of the nineteenth century recounted in the previous chapter. Despite these differences, 'primitive' notions of contamination live on. Douglas' argues that dirt has symbolic and

metaphorical meanings beyond those offered by germ theory. Dirt and the function of hygiene rituals raise issues that are particularly relevant to a discussion of MRSA, since much of the discourse in the media reportage and in policy documents links MRSA to hospital hygiene. This part of Douglas' work will therefore be particularly relevant to the examination of dirt, pollution and MRSA.

Douglas' view of risk is thus similar to Beck's insofar as she agrees that there is a heightened and increasing 'risk consciousness' and that the contemporary focus on risk is one consequence of globalisation. However, Douglas is more of the view that our belief in heightened risk is due to greater social insecurity, while Beck is of the view that heightened awareness is the result of a greater consciousness of self-generated ecological risk (David, 2005). For Beck the heightened perception of risk is a consequence of modernity in that modern risks are produced by modern technology and its misuse, Douglas would argue that the politicisation of certain risks serves particular *functions,* notably to solidify group identity in the face of increased insecurity and decreasing trust in expert opinion.

2.4 The Theory of Social Representations

This thesis aims to examine media coverage of certain emerging infectious diseases and answer the questions: who or what was held to be at risk from them, and who or what was held to blame for them. In this, the thesis attempts to address criticisms of both Beck and Douglas that their claims do not bear

empirical validation. Thus both theorists' insights are crucial to the analysis of the media coverage in the later empirical chapters. Thus far, this thesis rests largely in the discipline of science and technology studies, at least insofar as Beck's sociological and Douglas' anthropological insights have been appropriated by Science and Technology Studies to elucidate the subject of techno-scientifically generated risks. However, the other question asked here of the media coverage is 'How were these EID described?' For this question in particular, Social Representations Theory will be used to analyse the media coverage.

Although Beck and Douglas disagree on the 'reality' of the risks we face, both conceive this reality as a social construction. Whereas sociologists generally view human experience as in part a social construction, psychologists generally have an 'essentialist' view of human nature and have differing ideas of where experience comes from (Seale, 2003). Social Representations Theory sets itself in opposition to the tendency in much of psychology to look solely for essentialist, individualistic explanations for people's thoughts and behaviour. The SRT approach moves beyond such narrow concerns and attempts a methodical study of individual and group 'common sense' knowledge, both in trying to discover what individual people think, and beyond that to what processes shape the contents of their thoughts.

Like Douglas' work, SRT 'sits' in the Durkheimian tradition of epistemology. Conventionally it was cultural anthropology and to a certain extent sociology that dealt with the significance of collective systems of belief. Moscovici's

1961 work on psychoanalysis approached the same territory from the perspective of social psychology (Wagner & Hayes, 2005). Moscovici adapted Durkheim's concept of collective representations to make it more accessible to social psychology and more applicable to the modern world's emphasis on the individual (Wagner & Hayes, 2005).

SRT takes as its point of departure the diversity of individuals and phenomena, in all their strangeness and unpredictability, and aims to discover how individuals can construct a stable, predictable world out of such diversity through notions of common sense knowledge (Moscovici, 2000). One of the major concerns of SRT is the way in which new threats to a society are constructed by the public. SRT allows one to study the passage of knowledge about these novel threats from the more 'reified universe' of science via the more 'consensual universe' of the mass media into lay thinking. It has been productive in examining how society comes to terms with novel risks such as biotechnology (e.g. Gaskell et al., 2004), genetically modified food (e.g. Bauer & Gaskell, 1999; Bauer, 2002), and new infectious diseases such as AIDS (e.g. Marková & Wilkie, 1987; Joffe, 1999) and Ebola (Joffe & Haarhoff, 2002), among others. All of these empirical studies share a focus on the role played by the media in constructing groups' common sense. Furthermore, in each, contemporary values and concerns shape people's readings of the novel danger. Finally, symbols – such as monstrous genetically engineered tomatoes are seen to play a key role in constructing the risk in each. A social representational study of a risk provides awareness of the deep-laid thoughts, feelings and images that circulate in the social networks that apprehend the

risk. The three empirical case studies of this thesis will add to this body of SRT work on EID.

According to SRT, representations have two roles: firstly, they conventionalise the objects, persons and events we encounter. This means that the representation gives them a definite form, locates them in a given category and gradually establishes them as a model of a certain type. Thus each new experience is added to a reality predetermined by conventions which link each part with the whole and assign each individual experience, person and thing to a distinct category. Secondly, SRT holds that representations are *prescriptive;* they impose themselves on us with 'an irresistible force' – a combination of a structure which is present before we have even begun to think and a tradition which decrees what we should think (Moscovici, 2000). As Deaux & Philogene (2001) put it:

> Social representations act as a bridge between the individual and the social world. As a societal construction... they have a two-fold existence. First, they are the products of social thinking, structuring beliefs, and knowledge about phenomena considered significant for a given community. Second, social representations are the processes by which we construct our reality.
>
> (Deaux & Philogene, 2001: 5)

One of the central tenets in SRT is that the representation functions to make the unfamiliar more familiar. A new representation emerges in particular when we are faced with change or with novel phenomena that threaten our established

order. It is a collective coping mechanism which helps us impose order on a seemingly chaotic and unpredictable novelty. The representations constructed to grasp the unusual only bring one back to that which had long been familiar and which 'therefore gives us a reassuring impression of *déjà vu* and *déjà connu*' (Moscovici, 2000: 40). A social representation of a particular crisis is shaped by both historical events and contemporary symbols, and serves to familiarise the new threat and thus make it more decipherable. The two mechanisms by which this happens are *anchoring* and *objectifying*.

Anchoring

In anchoring, the new phenomenon is conceptually attached to certain chosen events, images and metaphors from the past. An anchor makes it possible for us to compare and interpret the new phenomenon against a known one. Classic SRT would have it that to anchor something is to classify and name it. Things that are unclassified and unnamed are alien, non-existent and at the same time threatening. An anchor reduces unfamiliar ideas to ordinary categories and images and sets them in a familiar context (Moscovici, 2000). Examples of anchors used in the case of infectious diseases would be 'Ebola with wings' for multi drug resistant tuberculosis; and the use of the 'plague' metaphor to describe AIDS (the 'gay plague').

Objectifying

Objectifying is a much more active process than anchoring. If anchoring frames the new phenomenon in terms of past events or historical references, objectifying uses contemporary symbols to categorise imprecise ideas, reproducing them among the things we can see and touch and thus control. An example would be when we compare God to a father (Moscovici, 2000) or the personification of races, classes, nations or human languages into the language of things (for example racist personification of African people as 'childlike'). Thus the abstract ideas of God or of Africans become solidified in our minds as a person with whom we have a particular type of relationship and who in turn has a particular type of relationship with us.

Through repeated usage, the image linked to a word or idea becomes conventionalised and thereby accepted as a reality. Later still, the image is wholly assimilated and what is perceived replaces what is conceived. Thus 'the gap between the representation and what it represents is bridged, the peculiarities of the replica become peculiarities of the phenomenon or the environment to which they refer, become the actual referent of the concept' (Moscovici, 2000: 42). Objectification is a mechanism by which socially represented knowledge attains its specific form. For example the atomic theory in physics became popularised partly through the simplifying metaphor of a ball shaped object with a hard core and orbiting electrons, thus making the abstract idea of an atom imaginable as a concrete thing, as if the representation were the real thing, rather than a social construction (Wagner & Hayes, 2005).

The concept of objectification overlaps with the notion of metaphor, insofar as by using a metaphor we transfer meaning from one realm or concept onto another, often to the point that we lose sight of the fact that we are using a metaphor (for example blood 'circulation'). Abstract ideas become solidified into conventionalised images and metaphors which are shared (though not necessarily consensually) by members of a particular societal group. For example the abstract and difficult notion of a gene may be associated by most people in the industrialised world with an image of a double helix shape; the abstract notion of a clone might be associated with Dolly the sheep. Another example pertinent to this thesis is the pictorial representation of the HIV virus as an object that looks like a golf ball stuck with golf tees, which could 'penetrate', 'unlock' or 'invade' and then 'hijack' the T-cell (Martin, 1994).

2.5 Illness and its metaphors

The role of metaphor in framing disease was examined in Susan Sontag's famous essay *Illness as Metaphor,* which focused on metaphors surrounding tuberculosis and cancer (Sontag, 1978). In her later work *AIDS and its Metaphors* (1989), Sontag argued that the metaphors associated with AIDS reflected the age of Star Wars and Space Invaders of the late 1980s. After the middle of the 1980s there was a shift away from the previously dominant metaphor of 'gay plague'. Increasingly, a new set of metaphors came into play that built on the dominant military metaphors commonly used in bacteriology but which also reflected the information age that was then dawning. Thus by a

process of repeated exposure to certain metaphors it became natural to talk of the HIV virus *docking* onto the T-cell; *reprogramming* the cell to produce more HIV virions; *hijacking* the body's own *defences,* and so on.

The military metaphor in medicine first came into use with the rise of modern bacteriology in the 1880s, when the invader began to be seen not as the illness but as the micro-organism that causes that illness. The germ theory of disease emerged from France in the 1860s and 1870s, at the time of Prussian militarisation and later invasion of France. The theory was to become the predominant feature of twentieth century medical beliefs. Illness was conceptualised as a microscopic invader, with germs commonly believed to have motivation and evil intentions (Gwyn, 1999). Military metaphors as applied to medicine thus took on new credibility as they reflected the efficacy of modern medicine. The war metaphor envisages dreaded diseases as an alien *other,* as are enemies in a modern war.

The military metaphor in the context of AIDS immunology may overtly connote decisive action and the refusal to 'give in' to the disease, but at a deeper level of meaning it serves to draw boundaries between self and *other* by representing the 'immunocompetent' body as a nation state, threatened from without by 'foreign' infection and protected by the defence activity of the immune system cells (Waldby, 1996) thus invoking anxieties to do with xenophobia, invasion, control and contamination (Lupton, 1994a). Apart from the dominant military metaphor, another metaphorical image used to conceptualise HIV / AIDS was that of a police state: of intruders, defence,

illegal aliens, cells held prisoner, and the walls closed around the enemy (Moulin, 2000) or of an elaborate communications network passing information back and forth (Martin, 1994). These types of surveillance metaphors and other similar images from science fiction gain currency in relation to other EID and return in the coverage of Ebola and SARS.

Martin (1994) argues that in the years following the AIDS epidemic the immune system has moved to the centre of our culture's scientific and lay conception of health, with people exhorted to take care of their immune system to bolster it by minimising stress and engaging in careful habits. It is believed that one can transform or train one's immune system to render it superior.

> The discourse privileging the wonders of biomedicine as finally offering a solution to the problem of HIV / AIDS ...was also accompanied by an emphasis on the 'power of positive thinking' as the antidote to the ill effects of HIV infection, a means of exerting 'mind over matter' with or without the help of drugs.
>
> (Lupton, 1999a: 50)

This way of conceptualising the immune system became embedded into representations of health and infectious diseases and becomes particularly pertinent in discussions of antibiotic resistant strains of bacteria in the late 1990s.

SRT thus allows for a systematic examination of 'common sense' knowledge. Rather than taking the individualistic approach common to much risk perception research or indeed common to much empirical psychological

research, SRT focuses on the shared aspects of representations, which *reach out* into the world and construct our thoughts and at the same time *constrain* what it is we can think about and how we think about certain phenomena. The representations of a phenomenon like EID in the media thus inform and restrict what it is we can and do think about them. The two primary mechanisms by which this happens are anchoring, whereby the new phenomenon is linked to historical references, and objectifying, a concept which overlaps with metaphor, whereby meaning is transferred from one concept to another.

2.6 Representations of disease and 'the other'

One of the weaknesses of SRT is that it cannot claim to have the predictive force of other approaches in psychology. However, its strength is that it can be used as a means of unpacking and gaining insight into particular instances of complex phenomena embedded in our language, our minds, and our behaviours. SRT demonstrates the role played by forces external to individuals, rather than through interpersonal processing, in shaping 'common sense' thinking. It allows for an examination of how group, cultural and societal influences come to be deposited in individual minds (Joffe, 1999).

The remainder of this chapter will focus on what insights empirical SRT work can give into how representations are used to make sense of illness and disease. Although SRT research has been carried out in many areas, for the purposes of this thesis it has been particularly fruitful in two spheres: in work on responses to mental illness (see Jodelet, 1991 below) and in risk perception of health

threats (see Joffe, 1999; Joffe & Haarhoff, 2002). The insights from these two areas will later be brought to bear on the three case studies of this thesis, in particular the role and use of historical and cultural referents in constructions of novel or contemporary social representations and in the construction of the boundaries between self and *other*.

A classic example of an SRT study that demonstrates both the *source* and the *consequences* of social representations is Jodelet (1991). She demonstrates how social representations are rooted in history and culture, and how they function to set and maintain boundaries between self and *other*. These issues will be relevant to the discussion of EID below. Jodelet's (1991) comprehensive study was of an open psychiatric institution, the 'Family Colony', in the town of Ainay-le-Chateau in central France, where for several generations mentally ill patients were placed in the care of local families. At the time of the study in the 1970s over 1,000 patients were living in around 500 families. Lodgers were sometimes accommodated in the family home itself, although more frequently they were accommodated in outhouses. The 'foster parents' showed a tendency to isolate themselves from the lodgers. In fact the *bredins* (or 'loonies' in the local dialect) did not share a true life in the community, and received discriminatory treatment at every level.

One of the most striking behaviours in the vast majority of placements was the separation of lodgers and foster parents' cutlery, crockery, glasses, and sometimes laundry. The foster parents themselves had difficulty accounting for these practices. Although foster parents explicitly denied the possibility of

contagion with the mental illness of the lodgers (in the medical sense), they still feared a 'magical' contagion. This connected on an unconscious level to the local custom and folklore of the area, in which travellers and tramps (strangers from elsewhere) were traditionally granted the hospitality of the region but, out of distrust and fear, were forbidden to share the table utensils. The modern day lodgers were similarly dispossessed of their rights and cut off from their past, turned into drifters by their illness. Thus the *anchor* of the representation of the lodgers, the traveller, served to bring together notions of insanity, sorcery and otherness. The key point here is that the representation of the *bredins* was anchored to ancient notions about dispossessed drifters. These notions in turn affected the way that the *bredins* were treated: given hospitality within the home, but forbidden to share fully in the life of the family and community. The separate cutlery was a potent symbol of this.

We see a number of binary oppositions at work here, which link to Marková's (2005) work on dialogicality (see below). Within the binary of self and *other (civilians / bredins)* there was another binary classification at work. The foster families knew nothing of the diagnoses of their lodgers or what had caused their institutionalisation. They categorised them as either 'retarded', which for them was equated with childlike innocence, or as 'nutters' who had visible manifestations of strangeness such as twitching or epileptic fits. Their classifications of innocent / retarded, and wicked / degenerate belie how their representations of mental illness, which had their roots in the Judeo-Christian tradition, were superimposed onto nineteenth century medical notions of retardation and degeneracy.

As well as the separation of eating utensils and washing, another striking finding was that there was an almost obsessive fear of (epileptic) fits amongst the locals. Jodelet speculates that behind this fear is hidden a sexual anxiety which the foster parents forbid themselves to express. The foaming at the mouth of those in a fit

> ...the slaver of an overheated, excited or rabid animal, recalls an instinctive and bestial element in human make up which resides in uncontrolled strength, violence and sexuality... fears of a sexual nature were present in the domestic rituals, not to speak of the symbolism with which the bodily fluids were invested and the association made, via epilepsy, between saliva and sexuality.
>
> (Jodelet, 1991: 266)

One point about this experiment in social engineering pertinent for this thesis and its concerns with out-groups and *othering,* is that those defined as *other* were not 'foreigners' but were from within the host society. There were no important cultural, racial or social differences between *civilians* and *bredins.* The locals had created a situation in which they were able to integrate an exogenous group without incorporating it. Whilst superficially accepting the lodgers, and making them apparently undifferentiated and integrated elements of the community, the locals ended up transforming them into an internal danger and erecting new and more subtle barriers against them (Jodelet, 1991). This study therefore provides a prime example of the utility of SRT in that it demonstrates the need to go beyond individual and individualistic explanations

of social phenomena and look at the source of representations (in this case of 'the mad') and how these representations influence attitudes and behaviour.

As discussed above, another area where SRT has been fruitful is in risk perception of health threats such as EID. The notion of risk as a defence mechanism has its roots in psychoanalytic thinking and although Douglas' does not draw on this, the notion is compatible with her thinking. Joffe (1999) builds on this idea that people aim to protect the identity of the self by linking the threat of danger with the *other*. In *Risk and 'the Other'*, Joffe (1999) examines the issue of risk and looks at how experts, journalists and lay people make sense of the threat posed by epidemic diseases. According to her, the *Risk Society* does not necessarily leave people with a heightened state of anxiety. Rather, people have defence mechanisms, namely their representations of risks, which function to control anxiety. Thus for Joffe (1999) the motivation for the choices of anchors and objectifications is primarily to do with identity protection, which refers simultaneously both to the protection of the in-group and self-identity and to building group cohesion by negatively identifying it from the *other*.

Jodelet's work is thus relevant to this thesis for two reasons. Firstly because of the way that it illustrates that *others* can come from within the host society. Similarly, in media coverage of EID, the *other* can also been an out-group from the host society (gay men, drug users, sex workers etc). The second point of connection with this thesis is that Jodelet's work is an example of how contemporary ideas about illness and disease are anchored onto existing

historical and cultural references. Her work also demonstrates the effect of these representations on behaviour. Joffe (1999) establishes that in the context of the risk of infectious diseases, notions of blame are used to construct boundaries between self and *other*, with misfortunes understood to be the price paid by people who are bad, dirty, bizarre, promiscuous; people who are 'not like us'. In this *risk / blame* model, foreigners, or already marginalised groups from within a society, are blamed for new epidemics of diseases.

2.7 The self and the other

The discussion of the *othering* in this context connects with Edward Said's account of *Orientalism* (Said, 1978), in which he argues that the construction of identity involves establishing *others*, 'whose actuality is always subject to the continuous interpretation and re-interpretation of their differences from 'us'' (Said, 1978: 332). *Orientalism* is a collective notion identifying 'us' Europeans against 'those' non-Europeans, and advocating that European identity is superior to an identity comprising all the non-European peoples and cultures. The resulting portrait of 'us' and 'them' is reductive and 'invidiously ideological'; where the West is portrayed as

> rational, developed, humane, superior and the Orient, which is aberrant, undeveloped, inferior... the Orient is at bottom something either to be feared (the Yellow peril, the Mongol hordes, the brown dominions) or to be controlled (by pacification, research and development, outright occupation wherever possible).
>
> (Said, 1978: 300-301)

Although Said's work focuses in particular on representations of the Orient, it fits into a wider debate encompassing Eurocentrism and racism. Eurocentrism, (which encompasses the United States, Canada, Australia and so on) posits European life as central and non-European life as peripheral. Having first emerged as a discursive rationale for colonialism, Eurocentrism

> bifurcates the world into "the West and the Rest" and organizes our everyday language into binaristic hierarchies implicitly flattering to Europe: *our* "nations," *their* "tribes"; *our* "religions," *their* "superstitions"; *our* "culture," *their* "folklore"; *our* "art," *their* "artefacts"; *our* "demonstrations," *their* "riots"; *our* "defense," *their* "terrorism".
>
> (Shohat & Stam, 1994: 2)

Ethnocentrism is not a synonym for racism, although racism (and its compatriots sexism, classism and homophobia) is often connected to it. Ethnocentrism involves seeing the world through the lens of one's own culture, whereas racism involves the stigmatising of difference in order to justify unfair advantage or abuse of power. 'Racism in this sense operates less on the cerebral level of opinion than on the visceral level of ethnic solidarity and us / them antipathy, the pronominal level of an assumed "we"' (Shohat & Stam, 1994: 24).

Shohat & Stam (1994) describe how metaphors play a crucial role in constructing Eurocentric hierarchies. One key colonialist trope was 'animalization'. This was rooted in religious and philosophical traditions that

drew sharp boundaries between humans and animals and where all animal like characteristics of the self were to be suppressed. Colonialist and racist discourse always renders the colonised bestial, 'savages and wild animals'. For example the Nazis described the Jews as vermin. Similarly Latin Americans are associated with tropical heat, violence and passion; the Arab world is condemned for the veil (overdressing), while the indigenous world is condemned for nudity (under-dressing). Africa is projected as hyper-masculine and Asia as dreamy and feminine, Africa as a child and Asia as an old man. These notions connect back to the social representational aspect of objectification outlined in the discussion above, for example the 'God the Father' image or the personification of Africans as child-like.

Objectification in SRT overlaps with the concepts of metaphor and symbolism and often when the objectified are other humans the metaphor is expressed in colonialist / racist terms. There is thus a tendency to view the colonised as vegetative and instinctual rather than learned and cultural. These tropes persist in modern discourse. Another trope is that of infantilism, of projecting the colonised as at an earlier stage of human, political or cultural development, for example the racist habit of calling adult colonised men 'boy'. Working within many of these tropes are binarisms. Tropes which use spatial metaphors signify symbolic hierarchies: of class (for example the upper and lower classes), of aesthetic judgement (for example high or lowbrow culture), of zoology (for example higher and lower species), and of the mind (the higher and lower faculties). Similarly tropes of light and darkness envision Africa as the 'dark continent' and of speak of the Western 'Enlightenment'. All these binarisms

are mapped onto others: sane / insane; pure / impure; reasonable / hysterical; healthy / unhealthy (Shohat & Stam, 1994: 140-1).

For Marková, (2005), making distinctions is a fundamental capacity of human intelligence and this capacity is related to the omnipresent human tendency towards thinking in polarities and oppositions. These are evident throughout the history of humankind in various kinds of epistemology, cosmological systems, religions, myths and philosophies: good / evil; right / left; health / sickness and so on. Dialogicality, is 'the capacity of the human mind to conceive, create and communicate about social realities in terms of *the Alter*' (Marková, 2005 : xiii). For her, SRT can provide the conceptual force in linking dialogicality and social thinking, as SRT conceives thinking and language as captured in common sense and daily discourse. Making distinctions and thinking and speaking in antinomies is already an expression of dialogicality, and the capacity both to conceive and comprehend the world and to create social realities in terms of the *Alter* (Marková, 2005).

Applying this concept of thinking in antimonies to the area of EID, we imagine a social representation of a phenomenon like AIDS 'to be organised around antimonies like dirt / cleanliness; morality / immorality; life / death; or even around several antimonies at the same time' (Marková, 2005: 179). The notions undergirding these antimonies are of course not new, a point which connects to Douglas and that aspect of her work which argues that in 'primitive' societies disease (as well as other misfortunes and catastrophes) was the result of the violation of a taboo or of sin. Illness thus served as a

social marker of the boundaries of acceptable behaviour. As we will see in the following chapter, morality / immorality was amongst the most important themata that have generated the early social representations of AIDS, although as time has passed, the thema morality / immorality have been challenged and problematised and newspaper coverage that framed AIDS in relation to morality / immorality and punishment have gradually become rare (Marková, 2005).

In sum then, connected to Douglas' conception of risk is a notion that risk is used to construct notions of blame which serve to distance the threat by negatively associating certain characteristics with the *other* and therefore as not posing a threat to 'people like us'. The work of Marková (2005), Said (1978) and Shohat & Stam (1994) is pertinent here because representations of EID are often saturated with notions of risk which are connected to binarisms delineating the boundary between self and *other.*

Conclusion

This chapter has explored several different approaches to risk. This thesis is based on a *weak* version of *social constructionism,* in particular the work of theorists like Beck and Douglas, whose insights will inform the empirical chapters of this thesis. For Beck, a particular feature of post-industrial society is that we are surrounded by risks, by which he means the anticipation of catastrophes or dangers. Douglas' view is that the politicisation of certain risks

serves particular *functions,* notably solidifying group identity in the face of diminishing social security. For her, risk is used to construct notions of blame, which serve to distance the threat by negatively associating certain characteristics with the *other* and therefore as not posing a threat to 'people like us'.

SRT allows for a systematic examination of 'common sense' knowledge and focuses on the shared aspects of representations, which *reach out* into the world and construct our thoughts and at the same time *constrain* what it is we can think about and how we think about certain phenomena. Studies such as Jodelet's demonstrate the force of social representations, their roots and consequences. Jodelet's interesting study draws particular attention to two phenomena which will be important in this thesis' discussion of media coverage of EID. Firstly, she shows how the *other* do not need to come from such a perceptibly different category as 'foreigners'. Ever more subtle conceptualisations and behaviours serve to maintain the boundaries between self and *other* when *others* are *almost* indistinguishable from 'people like us'. Secondly, Jodelet shows how the representations that are ingrained in 'common sense' and in the everyday enacted behaviours of the people she studied have their roots in the historical fables and folklore of the region.

Joffe's work, being psychological, is concerned with the lines of thought and feeling of individual people, as opposed to Douglas' focus of which is on communities. Joffe's work on social representations of infectious diseases focuses on the anxiety they provoke and on the unconscious defence against

that anxiety. This focus is clearly relevant to this thesis and its exploration of media coverage of EID. Joffe's work builds in part on that of Douglas, in that notions of blame are used to construct boundaries between self and *other*, with misfortunes understood to be the price paid by people who are bad, dirty, bizarre, or promiscuous. In this *risk / blame* model, foreigners, or already marginalised groups from within a society, are blamed for new epidemics of diseases.

Given the centrality of risk as a theme in contemporary social science, and given the ubiquity of media coverage of EID, it is perhaps surprising that there are not more empirical social scientific studies of EID. This thesis contributes to that literature. The following chapter will review the existing social scientific literature on media coverage of EID, in particular the media response to HIV / AIDS.

Chapter 3 – Emerging infectious diseases in the media: a review

> Everybody knows that pestilences have a way of recurring in the world; yet somehow we find it hard to believe in ones that crash down on our heads from a blue sky. There have been as many plagues as wars in history; yet always plagues and wars take people equally by surprise.
>
> *The Plague* (Camus, 1948 : 35)

Given the importance of emerging infectious diseases in contemporary risk discourse, media coverage of the phenomenon has attracted relatively little social scientific research interest, with some notable exceptions, particularly in relation to HIV / AIDS. One of the aims of this thesis is to address this gap and to contribute to the literature. This chapter will therefore review the existing social scientific literature on media coverage of EID. Given the pivotal importance of AIDS in changing the mood around infectious diseases, and in the birth of the category of 'emerging infectious disease', this chapter will examine in detail the literature on the media's treatment(s) of AIDS. In particular, it will draw out the social representational aspects of AIDS, the anchors, objectifications, symbols and metaphors by which the public(s) collectively came to make sense of AIDS. It will highlight how the lack of media interest at the beginning of the epidemic and the media panic in the mid 1980s reflected the shifting conceptions of who was at risk and who was to blame for the new disease. This chapter will then review the literature on media coverage of (what were by then called) 'emerging infectious diseases': Ebola, SARS, the 'flesh eating bug' and 'mad cow disease'.

3.1 HIV / AIDS

This section will review research into how HIV / AIDS was reported in the US and British media. It will describe the slow pace of early media coverage of AIDS, which, as we will see, contrasts strongly with coverage of later EID in the late 1990s and early years of the twenty-first century such as Ebola and SARS, public awareness of which was characterised by remarkably rapid dissemination via the global news media. This section will examine the reasons why this should have been so and will examine how the way AIDS was described and understood, the archetypes and metaphors used, changed over time in response to perceived changes in vulnerability to HIV / AIDS of different groups.

As described in Chapter 1, the middle part of the twentieth century saw a break with a historical trend in terms of how infectious diseases were widely conceived by both lay and expert opinion. Up until the appearance of AIDS in the early 1980s, there is evidence of a widespread hope and belief that infectious diseases would be a thing of the past in both social scientific studies of lay attitudes to health and in medical sources. AIDS shattered that hope. So in a sense the meanings attributed to AIDS marked a break with history, in that it ended the widespread twentieth century optimism that modern biomedicine could offer freedom from fear of epidemic disease.

Yet the phenomenon of AIDS did not drop into a political and metaphorical vacuum. Representations of AIDS were anchored to older representations of previous epidemics, particularly those of 'venereal disease'. The debate in the media about AIDS when it first arrived bore a very close resemblance to the discourse around syphilis in the second half of the nineteenth century (Wagner & Hayes, 2005). The social and cultural construction of AIDS (as opposed to AIDS the medical syndrome) also mapped onto contemporary concerns and trends such as the resurgence of the political Right, and the rise of US Christian fundamentalism in the 1980s. These political and social trends were evident in the Britain and elsewhere, but were particularly marked in the United States.

As well as carrying 'The Burdens of History' (Fee & Fox, 1988), representations of AIDS would also mould future meanings of later epidemics, which is what makes this disease so crucial for this thesis. The media coverage of AIDS produced a series of objectifications which became 'templates' (see Kitzinger, 1995) by which the later epidemics examined in this thesis were described and understood. These social representational aspects of AIDS fed into and formed the meanings and metaphors associated with subsequent EID.

1981–1983 – Media silence

In 1981 the first cases of what would later be classified as Acquired Immune Deficiency Syndrome (AIDS) were identified in a group of American gay men. Many studies have pointed to how, in both the US and in Britain, there was remarkably little media coverage of the new disease on its first appearance

(Allen, 2002; Altman, 1986; Treichler, 1999). By the end of 1982, there were 800 reported cases and 350 deaths of what was by then known as AIDS. Yet coverage in the mainstream press was still virtually non-existent (Allen, 2002). Media editors on both sides of the Atlantic refused to see how a story about homosexuals and drug users could interest their audiences. For them it failed the test of newsworthiness that other health stories about (what have since been classified as) 'emerging infectious diseases' passed. Editors felt that health stories such as Legionnaires Disease (in 1977) or Toxic Shock Syndrome associated with tampon use (in 1981) threatened *people like them*, whereas AIDS did not. This angle was taken as common sense in newsrooms (Allen, 2002).

1983–1985 – The gay plague and the 'innocent victims'

Then, in May 1983, an editorial in *The Journal of the American Medical Association* raised the proposition that AIDS might be transmissible to the 'general population' through 'routine close or household contact' (Allen, 2002). This story ended the neglect of AIDS by the media as news editors finally picked up the story in earnest. This construction of AIDS as a homosexual disease, the 'gay plague', built on historical references to 'homosexuality' as a generally execrated category, an exemplary sign of *otherness* whose presence served to define what was normal in the rest of the population (Watney, 1987; Weeks, 1993). This construction served to unite sexual and national identifications amongst readers over and above all divisions and distinctions of class, race and gender. Journalists and news

editors in the early days of AIDS took it for granted that their readers were composed of a homogenous white heterosexual group. Gay men were positioned as 'he-with-whom-identification-is-forbidden' (Watney, 1987: 12). The 'gay plague' thus became the dominant AIDS metaphor used in both tabloid and broadsheet newspapers (Eldridge et al., 1997; Watney, 1987).

There were several dominant archetypes appearing in these early news accounts of AIDS (Lupton, 1999a). The first was gay men with AIDS as 'guilty', deserving of their condition and punished for their deviant sexual activities. The antimony of this archetype was the 'innocent' person with HIV / AIDS, often represented by white, married, middle-class heterosexual women who were portrayed as having been infected by their male partners without realising it. When people with AIDS who had not contracted HIV through gay sex were portrayed, they were *othered* by being identified as having contracted the disease either through injecting drugs or 'promiscuity'.

When infected children and adult recipients of blood products were portrayed in the media, the construction was so dominant that they were represented in the press as atypical, as 'innocent victims' in contrast to the original sinners (Lupton, 1994b). In the US, the most famous and atypical example of an 'innocent victim' who generated an enormous amount of media coverage was Kimberley Bergalis, who was a 23 year-old Floridian who was one of several people infected with HIV by her gay dentist (Park, 1993), in one of only two known cases of health care worker to patient transmission, although other unreported cases are likely (Ayliffe & English, 2003). The most innocent of all

people with AIDS were infants and young children, who were portrayed as devoid of shame, blame or guilt for their infection.

Another dominant representation was of the 'face of AIDS', the 'AIDS victim', a ravaged, disfigured and debilitated patient, alone, desperate, but resigned to their 'inevitable' death (Lupton, 1999a). The 'AIDS victim' was pictured as a man with jutting bones, sunken glassy eyes and a listless expression of despair. This stereotype was so established in the British media coverage from the start of the epidemic that journalists would reject 'healthier' looking 'specimens' because they 'did not look the part' (Kitzinger, 1995). The death's head image and physical degeneration of the body was emphasised by before-and-after portraits of people with the syndrome. This visualisation of the stigma of AIDS was sometimes accompanied by textual references to gay or bisexual men who had become 'unmasked' by their fate, who could no longer pretend to be 'one of us'. Rock Hudson was later to be the most famous example of the unmasked 'AIDS victim', exposed as a pariah. The combination of image and text often referred to the previous 'self-indulgent' lifestyle of the 'AIDS victims' and the suffering that now awaited them, a suffering which was subtly signalled as their 'just deserts', from which neither fame nor money could protect them (Kitzinger, 1995).

Another archetype in the press coverage was that of the 'AIDS carrier', maliciously or carelessly spreading HIV to others. These were usually gay men, but intravenous drug users and bisexual men were often represented as duplicitous carriers to their trusting female partners (Lupton, 1999a). Randy

Shilts' comprehensive history of the early days of the AIDS epidemic *And the Band Played On* (Shilts, 1987) paints a picture of the most famous of the allegedly malicious or careless 'AIDS carriers': a Canadian air steward called Gaetan Dugas. Epidemiologists established that Dugas had had sexual links with at least 40 of the first 248 gay men diagnosed with AIDS in the US. Shilts describes Dugas as extraordinarily physically attractive and sexually promiscuous, a source of contamination and therefore a focus of blame (Williamson, 1989). Shilts' history is written in the style of a 'disease detective' genre, yet within this he uses another narrative anchor, that of 'Typhoid Mary'. Shilts controversially dubbed Dugas *patient zero,* a term which has entered the lay lexicon surrounding emerging infectious diseases and was used without explanation of its origins in the reporting of the EID described in the empirical chapters of this thesis.

The templates of the innocent / deserving AIDS victim, the 'face of AIDS' and the 'AIDS carrier' became conventionalised through use and re-use in the context of media coverage of AIDS. They are examples of the way that social representations become *prescriptive,* in Moscovici's (2000) terms they provide a structure that moulds the way we think about new phenomena. As we have seen, there was a sharp spike of media coverage of AIDS precipitated by the 'routine household contact' story in 1983. However, it was the revelation in mid-1985 that the actor Rock Hudson was suffering from AIDS that gained the disease huge coverage around the Western world.

1986–1987 – The risk to the general population

Up until late 1985, the US and British media were following the line that AIDS was not a threat to heterosexuals because the danger lay in anal sex, a notion characterised as the 'vulnerable anus' and 'rugged vagina' thesis (Treichler, 1988). Then in late 1986, the US Center for Disease Control reclassified a significant number of 'unexplained' AIDS cases as having been heterosexually transmitted to and from women. The widely espoused view that AIDS was an exclusively gay disease became increasingly untenable. By December 1986 the major US news magazines were running cover stories about how AIDS was a danger to heterosexuals. The cover story of the *US News and World Report* in January 1987 proclaimed, 'Suddenly, the disease of *them* is the disease of *us*' (Treichler, 1988: 193). Here the 'us' was represented graphically in the magazine by a young, white, urban professional man and woman. By late 1986, the perceived wisdom had it that AIDS had started first amongst gay men but would spread to the 'general population' via 'the bridge' of bisexual men and drug users. A heterosexual epidemic was widely anticipated.

The metaphorical weight of the notion that HIV could be transmitted via 'bad blood' to the 'innocent' became the twentieth century version of poisoning the wells for which Jews were put to death during the Black Death. Indeed, Right wing journals openly accused gay men of deliberately contaminating the blood supply to spread AIDS to the *general population* (Altman, 1986). The timing of the epidemic in the US also coincided with the politicisation of religious fundamentalism that began in the late 1970s: the so-called Moral Majority.

This coincidence was more than accidental: the changes in sexual mores that led to AIDS created anxiety amongst those who viewed traditional values as being under siege (Altman, 1986).

1988–1990 – The 'degaying of AIDS' and the 'myth of heterosexual AIDS'

After the moral and media panic of 1986 and 1987, media interest in AIDS diminished given the lack of new issues or events. This focus on the threat to heterosexuals in the late 1980s has been described as the 'degaying of AIDS' (King, 1993). During this period, the accepted orthodoxy about 'high-risk groups' gradually changed, partly because the battle seemed to have been won in educating gay men about the dangers of unsafe sex, and partly in response to the perception that a heterosexual AIDS epidemic was about to sweep the industrialised Western nations. Those involved in AIDS health education believed that the only way to ensure adequate funding for services was to play down the fact that it was very largely gay men in the West who were contracting HIV. Many gay activists also argued that the identification of homosexuality with illness and death encouraged homophobia.

In 1989, following speculation that the heterosexual threat had been exaggerated, those funds that had been made available began to be cut. Broadsheet and tabloid newspapers seized on the fact that AIDS was still a gay disease, and was not a threat to heterosexuals (Weeks, 1993). Thus the debate

seemed to come back full circle to the point in early 1986 when heterosexual AIDS was denied. Heterosexual AIDS was said to have been a 'myth'.

The 1990s – African AIDS

As the AIDS epidemic in Africa unfolded in the 1990s and as the perceived threat of a heterosexual HIV epidemic in the West receded, media representations of AIDS increasingly focused on Africa, Africans and African customs. Although occasionally stories such as the 1991 revelation that the (heterosexual male) US sportsman Magic Johnson was HIV positive provoked media interest in AIDS in the Western world, (Treichler, 1999) more generally references to the AIDS epidemic were linked to Africa. The impression was given that Africa was a 'cradle and hotbed' of AIDS; the 'dark continent' with its famines, disease and primitive and perverse sexuality (Miller et al., 1998).

> Discourse about AIDS in the Third World... first equates the Third World, (especially Africa, the "dark continent") with the savage, the alien, or the incomprehensible, then asserting the importance and achievability of reason and control. Although these two features may seem to be in conflict, they exist in fact in a relation of discursive symbiosis: the metaphors of mystery and otherness produce the desire for control, which is in turn fulfilled and justified by the metaphors of otherness and mystery.
>
> (Treichler, 1999: 101)

AIDS in Africa was attributed to a variety of 'exotica' (Farmer, 1999) which, like the 'gay plague' and the 'myth' of heterosexual AIDS, served to construct boundaries between self and *other* and thus reassure the British reader and distance them from the threat. Explanations for the high prevalence of AIDS in Africa included: quasi-homosexual transmission (i.e. from a previous lovers semen left in the vagina); refusal by African men to admit to homosexuality or drug use; anal intercourse as a method of birth control; prostitution and promiscuity; 'little known sexual practices' of Africans such as 'dry sex'; use of unsterilised medical equipment; various practices of 'native healers'; various 'rituals'; circumcision in women; lack of circumcision in men; widespread prevalence of disease and / or malnutrition; commerce with monkeys etc (Treichler, 1999). These kind of self righteous Anglo-American morality tales, 'missionary positions' (Watney, 1989) marked Africans as different from Americans or Westerners in general.

From the early days of AIDS, there had been links made between AIDS, Haitians and voodoo practices, even in prestigious medical journals (Farmer, 1999). These included stories of animal sacrifice or Haitians having contracted the virus from monkeys as part of bizarre sexual practices in Haitian brothels (Sabatier, 1998). Later, as the face of AIDS became increasingly African, increasingly the blame for AIDS focussed on Africa and Africans. The simian theory of the genesis of HIV was widely disseminated from the scientific sphere. Press reports claimed that AIDS arose in Africa sometime in the 1950s and was passed from green monkeys to humans. The evidence for this theory, part of which was later retracted by the scientists concerned, was based on

genetic analysis of viruses isolated from green monkeys and humans in West Africa and from macaque monkeys in US laboratories (Sabatier, 1998). Zimbabwean social scientists have said of the theory that it 'cohabit[ed] easily with racist notions that Africans are evolutionarily closer to sub-human primates, or with images gleaned from Tarzan movies of Africans living in trees like monkeys' (Chirimuuta & Chirimuuta, 1987 in Sabatier, 1998: 52).

Africans for their own part were led to ask how they could possibly have the same disease as rich white men in the West. Thus the symbolic and practical them / us division worked for 'them' as well as for 'us' (Treichler, 1999). Africans, together with the Chinese, Indians, Japanese, Malaysians, Philippinos, Mexicans, Venezuelans and the USSR, blamed AIDS on the West. They berated the degenerate Westerners sexual habits, both in terms of Western ex-patriots and tourists spreading AIDS, and also in terms of the West exporting a culture of pornography and easy sex (Sabatier, 1998).

Another reaction amongst people in Africa and the Soviets was to blame AIDS on a US scientific conspiracy produced by germ warfare experts in the US military. In this way, those blamed for the origin and spread of AIDS themselves externalised the blame and threat, a phenomenon which has been observed in gay men and in other groups (Farmer, 1999; Joffe, 1995; Park, 1993). Groups that have been blamed for AIDS by the wider culture may be more suggestible to conspiracy theories of the origin and spread of AIDS. Farmer (1992) found that conspiracy theories have received regular attention in the US and European gay press and in the developing world. AIDS is said to

have been manufactured in a research laboratory by the US military for the purpose of genetic or biological warfare. Conspiracy theories thus not only locate blame for AIDS outside the African / gay community but create a sense of a shared enemy, rather in the way that the out-groups themselves are treated as the enemy of mainstream society.

Following representations of the AIDS epidemic over the past 20 or so years allows tracking of a dynamic set of representations that has responded to shifting ideas of which groups were considered to be at risk. The scientific reports of the first 18 months or so were not considered newsworthy to a presumed white heterosexual readership of newspapers on both sides of the Atlantic. Only when the possibility that HIV could be transmitted to 'the general population' via either 'household contact' or later through heterosexual sex did the media pay attention to the unfolding epidemic. AIDS was configured in terms of past epidemics, the majority of which had been linked to foreigners, out-groups and perverse practices (Joffe, 1998). By the middle of the 1980s representations of the AIDS epidemic had been firmly anchored as the 'gay plague', with homosexuality positioned as a sign of otherness. A heterosexual AIDS epidemic was anticipated in the West due to 'leakage' from 'high risk groups' (bisexual men and drug users) and thus resources were focussed on containing the risk to heterosexuals. And when the explosion in heterosexual AIDS did not happen, media attention subsequently diminished. In the late 1990s effective treatments for HIV became available to people in the West, and the archetypal 'AIDS victim' portrayal , the 'face of AIDS', no longer belonged to a Western gay man but to an African woman.

3.2 Ebola

After the experience of AIDS, and partly as a result of the lobbying by those promoting the 'emerging infectious disease' paradigm, new disease epidemics following AIDS were far more newsworthy. Ebola first appeared in Africa in 1976, but generated little news interest in the Western press, in fact generating less that 10 articles in the British newspapers (Joffe & Haarhoff, 2002). As we saw in chapter 1, around 1995 there was a peak of interest in EID, with the IOM report on emerging infectious diseases, which framed the 'new' problem, as well as two best-selling popular science books on the subject, *The Coming Plague* and *The Hot Zone.*

So by the time Ebola reappeared in Zaire in 1995/6, the climate had changed, 'emerging infectious diseases' were clearly much higher on the news agenda, and the 1995 epidemic generated at least 60 British newspaper articles (Joffe & Haarhoff, 2002). Ungar (1998) examined the newspaper coverage of the same 1995 Ebola outbreak in Canadian, US and British newspapers. His analysis was based on a dense sample of nine English language (three Canadian, three US and three British) national newspapers, and television coverage on the three major US news networks over a three-week period between 10th and 31st May 1995. He argued that panic over infectious disease threats was related to: 'the number of dramatic *precipitating events;* the potency and vividness of the underlying *dread factor* ... recent cultural preoccupations and resonances; ... the *timing* and *location* of the critical events; [and] the amount of *consensus* in

the definition of the threat' (Ungar, 1998: 37 *italics in original*).

Ungar describes a pattern in the reporting of emerging infectious diseases. Initially the reporting was based on a set of themes, the *mutation-contagion* package. This was composed of the following core ideas: that *microbes are on the rampage* and that we are experiencing a 'wave of new assailants'; that *microbes are cleverer than us* and are evolving to 'outwit us'; that microbes and environment are conjoined in an ecological parable, and that population growth, environmental degradation and factors such as antibiotic overuse are responsible for this unfolding catastrophe; that *microbes know no boundaries* (through globalisation and travel); and *that we are waiting for the next plague* (apocalyptic prophecy). This package was clearly constructed around a frightening core with few instances of reassurance.

However frightening this might be, the sense of threat was still somehow hypothetical. The diseases themselves and the likelihood that readers would be personally affected (at least for now) remained abstract and distant, as the threat tended to arise in geographically distant or marginal populations. At the same time, the threats were offset by the promise of 'medical progress', which presented a stream of 'amazing new discoveries'. Soon after the initial reporting, however, the tone of newspaper coverage tended to shift to what Ungar calls the *containment* package, which aims to defuse the potential panic that emerges early in the coverage. This *containment* package relied for its mollifying effect on the metaphor of 'otherness' (Ungar, 1998).

The 1995 Ebola outbreak therefore embodied many of the most terrifying aspects of the *mutation-contagion* package: Ebola came from elsewhere, fitted the ecological parable, was *always* paired with 'killer' or 'deadly', and was almost always accompanied by descriptions of liquefying organs and profuse bleeding. What characterised the Ebola coverage was that it could be the harbinger of a wider pandemic and attendant panic. 'Ebola, as the embodiment of the *mutation-contagion* package, represents a monster virus on a potential rampage' (Ungar, 1998: 47).

But after just a few days came the appearance of what Ungar calls the *containment* package, which aimed to diffuse the potential panic present in the initial coverage. So in order to play down the panic that the same newspapers had themselves had a part in creating, the 'appalling sanitary conditions' of many African hospitals were contrasted with the exemplary protective methods of the Western experts. Thus the focus of the threat moved from the virus itself to Africa's hospitals. The 'appalling sanitary conditions' of many African hospitals were contrasted with the exemplary protective methods of the Western experts.

A few days later, there was a further shift in the tone of the newspaper coverage, as attention was given to Western health teams, which, in opposition to the chaotic medical services in Zaire, were portrayed as 'disease detectives'. By this point Ebola was being treated not as a rampaging virus, but as a disease that is difficult to catch. Previously the newspapers had proclaimed the danger of the 'stepping off a plane scenario', in which a person can travel across the

world whilst carrying the infection. This was now undermined, often in the very newspapers which days before had espoused it, as journalists began to report that people with Ebola are not infectious until ill, and then are unlikely to be allowed to catch a plane.

An interesting footnote to the description of Africans and African health facilities as appalling and disaster ridden is provided by Garrett (1995). In *The Coming Plague,* she describes how a group of Western physicians and scientists who went to the Ebola and Zaire rivers in 1976 to investigate the outbreak were taken aback by the 'remarkably wise measures' taken to stop the epidemic spreading. Roadblocks were staffed around the clock near village entries, virtually all river traffic was halted and sick villagers and their families were kept under quarantine. Peter Piot, later Head of the Joint United Nations Programme on HIV / AIDS (UNAIDS), remarked 'These people have really got their act together' (Garrett, 1995: 123).

Joffe & Haarhoff's (2002) analysis of the newspaper coverage of the same Ebola outbreak found that *all* articles about Ebola in Britain mentioned Africa; almost half linked Ebola and Africa to monkeys; another half linked Ebola to the lack of appropriate medical facilities in Africa to deal with it. Beyond this, other factors implicated in the spread of Ebola were poverty, pollution, forest environment and tribal rituals. By symbolising Ebola as essential to Africa as a whole, the implication was made that such disasters were 'incontrovertibly African' (disaster ridden), and by implication that the West was superior. In terms of whether Ebola was a threat, the newspapers evoked fear by making

comparisons with AIDS and by highlighting how terrifying and horrific it was, for example by providing vivid descriptions of liquefying bodies. Alongside the fear theme, the articles were pervaded by an emphasis on how Ebola can be brought under control by isolation, quarantine and surveillance (by Westerners), at the same time rarely alluding to the role played by Africans, who were portrayed as passive and voiceless. 'The media raises the spectre of the potential globalisation of the danger of Ebola and then reassures and mollifies its readership with text that refers to methods of containment' (Joffe & Haarhoff, 2002: 966). The way that reassurance was provided was through the notion that Africa and the Africans are so different from 'us', (so *other*) that the disease will be *contained*, and will in reality provide nothing more than a hypothetical threat.

> The strategy of othering is a direct counterpoint to the theme of globalisation... Whereas globalisation is predicated on a levelling of nations and individuals, othering aims to reverse the rites of inclusion and protect the social order by erecting barriers of exclusion.
>
> (Ungar, 1998: 52)

By 1995 then, partly as a result of the framing of the outbreak as a 'newly emerging' disease, the Ebola outbreak in Zaire had generated a great deal of press interest. The reporting of the outbreak started with a set of themes likely to engender panic, the *mutation contagion* package. However this was soon followed by a set of more reassuring themes, the *containment* package, which promised that Western medicine would deal with the threat. The threat of

Ebola was also softened by the portrayal of the disease as something characteristically African. By *othering* Africa and Africans, the threat was distanced from the British reader. This of course connects to the discussion of *othering* in Chapter 2 and will be an important theme in terms of later epidemics of EID.

3.3 SARS

In 2003 there was a flood of media interest in the epidemic of severe acute respiratory syndrome or SARS. The story of SARS is recounted in detail in Chapter 5, but of the empirical studies of this thesis, the SARS epidemic gives us the most recent example of a how a genuinely new emerging infectious disease epidemic was covered by the media. Buus & Olsson (2006) analysed media coverage of the 2003 SARS crisis from three newspapers with an international readership: *The Economist, The International Herald Tribune* and *The Financial Times.* Their analysis showed that the Chinese system was consistently held responsible for both China's role in the initial wave of the epidemic and for its responsibility for the spread of SARS to other countries.

> China's perceived inability or unwillingness to release information – to come clean about SARS – was in turn linked in many of the articles examined to the purported "personality" of the Chinese system and its "habit" of avoiding sensitive or negative issues
>
> (Buus & Olsson, 2006: 75).

Another theme identified centred on China's external ability to cope with SARS, in particular its failure to co-operate sufficiently with the World Health Organisation from the outset and of the implications of this failure (Buus & Olsson, 2006). Many accounts used the historical analogy of China's mismanagement of HIV, and concluded that in both cases there was a pattern of 'denial'. SARS was also seen as a catalyst that brought new life to an old system in that the whole of Chinese society was mobilised to fight SARS; the success of this totalitarian approach paradoxically made the system more visible. A number of articles studied the dire medical situation in China, which was seen as the result of a longstanding and destructive health care policy and system so that China's economic reforms had brought the country's rural health care system to the brink of collapse. China was portrayed as the world's Achilles Heel in the fight against SARS, an 'old' system using traditional outdated methods to deal with 'new' and modern threats.

A final theme centred around the actual and potential impacts of SARS on China and on the rest of the world. Many of the articles pointed to the longstanding weaknesses within the Chinese system that pose a risk to everyone's economic health as long as they are not addressed. The West's relationship with the growing economic power of China was portrayed as an ambivalent one. On the one hand, the West is increasingly economically dependent on China and is eager to profit from China's economic modernisation and liberalisation (Buus & Olsson, 2006). Yet at the same time, China's rapid growth, with its attendant urbanisation, mass migration, environmental damage and economic polarisation is seen as presenting to the

West the threat of breeding, harbouring and spreading deadly new infectious diseases.

Larson et al. (2005) examined the framing of SARS in the British media and compared it to the framing of the 2001 epidemic of Foot and Mouth Disease. While Foot and Mouth Disease was framed in terms of traditional warfare (fortress, siege mentality, invader etc), they found that SARS was framed differently. Some articles talked about the SARS virus as a form of natural 'bioterrorism' which instead focuses on modernity and globalisation. What was striking about the coverage of SARS was the relative absence of war metaphors when compared to the media coverage of 'invasive species' and Foot and Mouth Disease. The limited and fragmented metaphors used, and the avoidance of the war metaphor in the SARS coverage, was probably the consequence of the immediate context of the war in Iraq (Larson et al., 2005).

> SARS was, after all, a rival to the Iraq War news, rather than a subject to be elucidated through comparison. The political divisions that accompanied the Iraq War may also have contributed to making war an unattractive metaphor system for an epidemic in which international cooperation and diplomacy was so important.
>
> (Larson et al., 2005: 261)

However war metaphors were used in the Chinese media, perhaps because of the disease was perceived as a threat to the nation, in the same way that Foot and Mouth Disease was perceived as a threat to the British nation and in particular its economic interests.

Wallis & Nerlich (2005) examined the social framing of SARS through metaphor use. They found that in the SARS coverage the British media employed metaphors of killer and of control, while other metaphors such as war and plague were notable by their absence. They argue that the context of the war in Iraq may have pushed commentators to develop a distinctive discursive system for the two stories. the World Health Organisation presented itself as *working with,* and *collaborating with* national authorities, so at no point was a war declared. The lack of a plague metaphor may reflect the characteristics of SARS – its speed, ease of transmission, low mortality, few external marks of infection and lack of socially or nationally defined core of cases – that limited stigmatisation of the disease or its sufferers. Comparisons with other diseases especially the 1918 flu pandemic also dominated. Wallis & Nerlich (2005) also found that the 'hard earned pessimism' of disease control was a factor in the avoidance of a military metaphor, given the international difficulties in recent years in controlling AIDS, tuberculosis and malaria. Thus moderate expectations were made to 'contain' rather than 'defeat' SARS, reflecting not the 'war on cancer' of the 1970s but the more modest World Health Organisation recent campaign to 'Roll Back Malaria' (Larson et al., 2005).

The main conceptual metaphor used in SARS was 'killer'; in particular representing SARS as a killer animal fitted in with ideas of *hunting* or *tracking* the disease. SARS as a killer was a single entity, not an army or force with campaigns, tactics or generals. The concept of SARS as a 'superbug' occasionally featured in the tabloids, locating SARS within the genre of

MRSA. Casting SARS as a killer gave it an active role; those it infected were passive victims, a pattern of responsibility that differs from the individual culpability of AIDS 'victims'. It also lacked a localising name, such as West Nile Virus, it was rarely called 'Hong Kong Flu' (Wallis & Nerlich, 2005).

The news coverage of the 2003 SARS epidemic has been examined by several authors. Themes that emerge from these examinations include a surprising absence of war metaphors, most likely due to the then on-going war in Iraq; and a set of metaphors that describe SARS as a 'killer', which was being 'tracked'. Finally the coverage of SARS also highlighted wider concerns about the growing economic power of China and the threat that this posed to the West and to Western economies.

3.4 When the other cannot be blamed

As we have seen, by 1994 the media had tired of AIDS stories, but the apparently sudden occurrence of the so-called 'flesh-eating bug' (*necrotizing fasciitis*) in Britain provided a week of hysterical news coverage after reports on 24th May 1994 that a microbial infection caused by *streptococcus pyogenes* was responsible for three deaths. Gwyn (1999) examined coverage of the scare in the British newspapers and draws attention to how the coverage juxtaposed those diseases where the 'innocence' of the sick is unquestionable (such as necrotizing fasciitis) against AIDS as a competing discourse. Media representations of the 'killer bug' were thus juxtaposed with the paradoxical

relationship of people with AIDS as empowered by 'politically correct pals'. The juxtaposition serves to challenge public spending on AIDS research.

> In the reporting of the killer bug disease, patients were not subject to any of the accusations of complicity reserved for people with HIV / AIDS, and blame for the outbreak was deflected on to the Secretary for Health at the time (Virginia Bottomley) and on spending cuts at the Public Health Laboratory Service.
>
> (Gwyn, 1999: 337-8)

In contrast to the *killer bug* casualties, whose diversity (and yet whose unifying innocence) was emphasised, the projection of people with HIV / AIDS touched on the audience's cultural resources so as to create a projection of *otherness*. This quality of innocence distinguished the discourses surrounding the 'victims' of the killer bug disease radically from those concerning people with HIV / AIDS, for whom a dominant metaphor was of 'AIDS deviance' (Gwyn, 1999).

So for the case of a disease whose 'victims' were portrayed as 'innocent', we see another pattern of blame emerging: the blame instead of being externalised to *others* is directed to authorities and politicians. As we have seen above, the media's 'usual' response to a new epidemic is to externalise the threat by blaming the *other*. It is possible to see this pattern in diseases that are either *far-flung* or that only affect foreigners or out-groups within mainstream society. This means of dealing with the threat is clearly not possible with an

epidemic disease that affects people at random from within mainstream society.

Demko (1998) examined coverage of BSE in five US newspapers (*The New York Times, The Chicago Tribune, The Los Angeles Times, The Wall Street Journal* and *The Washington Post)* between 1 January and 1 November 1996. Her work paints a clear picture of the 'foreigners eat disgusting food [and so] it couldn't happen here' type of representation of a new infectious disease. Her research describes how one major theme, and recurring pun, in many if not most headlines in the sample was 'Mad Cows and Englishmen'. Many articles focused on beef consumption in Britain and pointed out the link between British identity and culture on the one hand and beef consumption on the other. Beef was depicted as rooted in British norms and mores. By contrast, US consumption of beef was described as not excessive. Therefore BSE was depicted a British problem and not one that could happen in the US.

> This image [mad cows and Englishmen] serves a useful purpose in American consciousness which is to distance the American reader from the BSE crisis which occurs "over there". The more the diseased beef can be attributed to Britain, the lower the fears that it could become an American problem. Mad cow disease is depicted to derive from a national overindulgence in beef. The metaphor allows American readers to feel safe while blaming the seemingly stuffy, unnatural British traditions which have caused such problems. Many of these articles separate British beef problems from our own supposedly "healthy" consumption of beef.

(Demko, 1998: 160)

So from a US perspective, the British were in effect *othered.* Yet from a British perspective, the *othering* representation of BSE does not appear to be present. In a study of British newspaper coverage of BSE, Dornbusch (1998) examined coverage of BSE from January to September 1996 in *The Financial Times* only, his (perhaps questionable) rationale being that British newspapers tend to incorporate political views into news reports more prominently than happens in other countries while *The Financial Times* minimises journalists' political views and presents a more balanced view (Dornbusch, 1998). *The Financial Times* is also the most widely read British newspaper internationally (1.3 million readers in 160 countries). He argues that the British press was partially responsible for creating the mad cow crisis. He concludes that the media filled a void and became the primary health information disseminator, drawing conclusions regarding health risks; that the media misinterpreted scientific data and engendered fear over BSE; and finally that the British government was portrayed as unreliable and incompetent in dealing with the BSE crisis (Dornbusch, 1998).

Another issue in media coverage of food stories is what impact that coverage has. How do the public(s) understand and react to media messages about the risks of eating certain foods? Macintyre et al.'s (1998) focus group research identifies a number of factors that have a bearing on both the interpretation of media information and on food choice: They found that respondents' reported eating habits were associated with age, gender, income, personal experience,

national identity, and broader aspects of identity such as desired body image. Respondents appeared knowledgeable about salmonella, listeria, BSE and coronary heart disease, to the point of surprising themselves with how much they knew and of how much of their knowledge seemed to come from the media. The respondents demonstrated a general scepticism about official advice and the pronouncements of politicians, scientists, 'experts', and the media. The role of personal experience in mediating the understanding of and responses to media and health-promotion messages seemed crucial. For example, one focus group who worked together knew a colleague who had been seriously ill with salmonella, which had caused them to stop eating eggs. Many respondents' eating habits were generally only altered for a short space of time following a media scare, after which they returned to their old eating habits.

In sum, British press coverage of certain EID scares such as the 'flesh eating bug' story and the 'mad cow disease' story could not *other* the disease as a threat only faced by people not like 'us'. 'Mad cow disease' potentially posed a threat to any person who had eaten British beef products since the mid 1980s. However, from the perspective of another country, the threat could be *othered* and the US coverage thus portrayed 'mad cow disease' as inextricably linked to British eating habits, just as Ebola was inextricably linked with Africa and African hospitals. Other research has examined the effect that the media coverage of 'mad cow disease' had and points to general scepticism about the role of expert advice given via the media.

Conclusion

When new epidemics of infectious diseases are seen as a threat to 'the general population' they are initially newsworthy, but once diseases 'settle in on the poor' (or migrants) the problem consequently loses media attention and its position on the public health agenda. What appear to be slow developing chronic diseases such as AIDS are, at least initially, less newsworthy, at least until they are portrayed as posing a threat to 'the general population'. In turn they become less newsworthy once more as they are increasingly linked to the poor. Excess disease burden on the poor tends to receive less media attention partly perhaps because society expects the poor, both at home and abroad, to be sicker than the rest of society. Infectious diseases that produce clusters as an epidemiological feature are more likely to *emerge,* or at least to emerge rapidly, than those with an environmental or nutritional aetiology such as 'mad cow disease' (Packard et al., 2004).

On the other hand, certain diseases of limited epidemiological importance, such as Ebola, have received rapid public health and media attention. These diseases tend to have certain features: they tend to be those that produce clusters of cases with dramatic symptoms and some deaths, the type of pattern that public health authorities are trained to investigate; they tend to be those that can be diagnosed by a laboratory test; and they tend to be those that could potentially threaten a wide social spectrum of people ('people like us') if an infected person 'stepped off a plane' (Packard et al., 2004). For illnesses with a less

dramatic presentation, media coverage is often slow to develop. Even illnesses that affect a large number of people, such as hepatitis C virus, may not draw rapid or extensive news coverage (Packard et al., 2004).

Blame is an important theme in newspaper reporting of all emerging infectious diseases. In most cases, the 'victims' of the diseases are blamed because they are said to have 'brought the disease on themselves' because they are dirty, live in filth or too close to animals, have bizarre customs or habits, or have perverted or promiscuous sex. This *othering* mechanism serves to distance the threat as only affecting 'foreigners' or out-groups from the mainstream society (gay men, drug users, sex workers). However, there are some epidemics in which *others* cannot be blamed. In the case of the British reporting of the 'flesh eating bug' and 'mad cow disease' stories, the blame was directed not 'outwards' but 'upwards' to government, or variously to health care workers, scientists and farmers. Arguably, one of the most important media triggers that turns a potential risk to public health into a major story is the question of blame, in particular identifying the party, whether government or otherwise, upon whom to place the blame, for example in an accident such as a chemical spill (Bennett, 1999). Other triggering factors include alleged secrets and attempted cover-ups; conflicts between parties; links to existing high-profile issues or personalities; and the number of people exposed to the risk (Bennett, 1999).

The empirical chapters of this thesis will pick up these themes of dirt, of difference, of blame and *othering*. The thesis will firstly compare the analysis

of the media coverage as described in the papers reviewed in this chapter and see to what extent the analysis in this research differs from that of the existing literature. The major contribution of this thesis is that it 'locates' the coverage of each specific epidemic of EID in the context of the EID paradigm, as well as in the context of the existing social scientific literature on risk and blame. The research reported in this thesis addresses two questions. Firstly, to what extent is the theoretical work on risk and blame borne out by an empirical study of media representations of risks in general? Secondly, are 'emerging infectious diseases' sufficiently similar or substantively different from the types of risks that are envisaged in the theoretical risk literature?

Chapter 4 – Methods

> A newspaper represents the world for a group of people in an accepted way, otherwise people would not buy it. In this context the newspaper becomes an indicator of their world view.
> *Qualitative Researching with Text, Image and Sound*
> (Bauer et al., 2000: 6)

The reporting of new infectious diseases in the media is an important strand of a wider discourse of risk and connects to contemporary anxieties such as the apparent inability of technology to contain new threats, and of the effects of globalisation. One aspect of globalisation is itself the global news media, which makes 'far flung' stories seem to have local significance. In the context of EID, the global news media enables a greater awareness of the threat of global epidemics of infectious disease.

From 1995 EID were a major news issue. This increased news interest was not simply because of the several new infectious disease pathogens identified from the 1970s. The news media were not simply reporting a phenomenon that existed in a realist sense 'out there'. Nor were they reflecting increased interest in the phenomenon due to the increased numbers of people affected and infected by these new diseases, in particular the case of HIV / AIDS. As discussed in the previous chapter, the selection of risks reported in the media does not reflect either the seriousness of the risk or the incidence figures of those affected or potentially threatened by it. News values, particularly the way the story 'resonates' with other cultural givens and the self-referential media

momentum, are crucial in this respect (Kitzinger & Reilly, 1997). As discussed in Chapter 1, the increased news interest in infectious diseases after 1989 was in large part a result of the deliberate courting and nurturing of journalists and press sources by those US scientists involved in promoting the EID paradigm.

The central aim of this thesis is to examine and compare the social representations of three of these 'emerging infectious diseases' and to place those representations in the context of the existing theoretical literature on risk and blame. This chapter will start with a rationale for the methods chosen to achieve this, and look at why those methods were thought to be fit for purpose, as well as what the limitations are of the methods chosen. The chapter will then go on to outline in detail the research design and the sampling and data collection strategies used in each of the three case studies. Finally the chapter will discuss the way that the data was interpreted.

4.1 Rationale for chosen method

The research described in this thesis is based on a content analysis of newspaper reporting of three cases of a new strand of biomedical discourse: *emerging infectious diseases.* The premise of this research is that since 1989 this new discourse has been communicated from scientific experts to lay people via the mass media. In Moscovici's (2000) terms EID have been transformed from the 'reified universe' of biomedical scientists into a 'consensual universe' of collective life and common sense knowledge. In

secular industrialised western societies, the main source of our representations is the mass media, as well as conversations with other people.

There are three aspects to studying the media, and 'media studies' is often understood to divide into three broad areas of inquiry: production, representation and audience reception (Seale, 2003). Media production studies, such as those undertaken by the Glasgow Media Group, investigate the nature of government, business, the professions and their relation to the media. At the other end of this 'circuit of mass communication' (Miller et al., 1998), audience reception studies examine the reception of media messages. During the 1980s many of these studies, in particular *audience ethnographies* (usually based on focus groups or interviews or panel methodologies), explored the diverse ways that different social groups 'read' particular media texts, most often television programmes (Smith, 2001). However, of the three aspects of studying the media, the one most commonly carried out is studies of representation, which analyse media messages themselves.

The mass media form a crucial link between scientific and lay understandings of complex new phenomena such as emerging infectious diseases. In a developed secular country like Britain, television is the most ubiquitous medium for the transmission of information, although the Internet may in the future usurp that position. In contemporary British society, newspapers hold a powerful and effective position in communicating the written word. They provide a relatively immediate contact between writer and reader (within 24 hours), as well as a shared, common, though not necessarily consensual, world-

view for all readers of a particular newspaper. Thus '*Guardian* reader' or '*Daily Mail* reader' becomes a widely used short-hand for describing a stereotype of someone with a particular educational level, socio-economic status and political outlook.

The predominance of studies of written text over images can probably be explained by the ease with which data can be collected and analysed. The materials needed for audience reception studies, transcripts of interviews and focus groups for example, are onerous to produce as they involve gaining access to participants, questioning or observing them and then transcribing the results (Seale, 2003). Given the importance of the media in constructing common sense ideas, it is appropriate that much empirical SRT research also examines existing texts such as newspapers. By far the majority of social studies of science in the media have been based on analysis of newspaper texts, not because newspapers are the most widespread or influential media nor because they have wide readerships, but because this is the most accessible, efficient and cheap way to study a mass medium (Gregory & Miller, 1998). The research described here is located in this tradition.

The central aim of this thesis is to examine the social representations of EID. As discussed in Chapter 2 above, one strand of SRT sees lay knowledge as more than knowledge in the heads of individuals. It regards lay knowledge as knowledge produced by a community of individuals in conditions of social interaction and communication and therefore expressive of community, history and culture. A social representation is thus interpretive and concerned with

meaning (Wagner & Hayes, 2005). This thesis thus aims to explore the *meanings* of EID in contemporary Britain. In order to do this, a content analysis of the newspaper reporting will be carried out.

There are two basic purposes of content analysis. When the focus is on the audience (and the audience's reception of a particular text), the text is regarded as a medium of appeal, an influence on people's prejudices, opinions attitudes and stereotypes (Bauer, 2000). Audience studies often show that viewers or readers actively read texts and adapt them for their own pleasure, and that these readings are influenced by social factors such as race and gender. There is no necessary correspondence between the messages encoded into texts by their producers and those that are read by their audiences; and the idea of a uniform audience advocated by the mass society hypothesis is questionable – rather there are multiple types of audiences with diverse social characteristics and viewing practices (Smith, 2001).

The research described here focuses not on the audience reception but on a source of social representations, and regards the text corpus as a medium of expression of a community that writes. In SRT terms, representations are a product of the professional activity of those people who propagate them: for example by representatives of religions or science or in this case by journalists. Thus, in order to understand a representation, we have to start with that, or those, from which it was born (Moscovici, 2000). Such content analysis as is described here thus allows us to construct indicators of world views, values, attitudes, opinions, prejudices and stereotypes and compare these across

communities (Bauer, 2000). However, one cannot infer from the interpretation of newspaper texts alone any particular intention of a communicator or any particular reading of an audience. This is considered the fallacy of content analysis. Expression and impression are assessed only in aggregate, and probabilistically (Bauer, 2000).

For Moscovici (2000), the way that science moves from the reified realm to the lay realm is via the mass media. If this were the only way that social representations could be conceived, then the methodological imperative for this thesis would be (a) to examine how a particular phenomenon (in this case EID) were described by scientists in scientific journals and policy documents, then (b) to examine how the media transforms those messages and finally (c) to interview members of the public to see if the social representations presented by the mass media tallied with the representations that were somehow 'in their heads'. Social representations are often studied in this way; for example Joffe & Haarhoff (2002) and Miller et al. (1998) provide two examples in their studies of media representations *and* audience reception of AIDS and Ebola. Although studying social representations appears to demand such a multi-methodological approach, the majority of SRT studies are in fact limited to a single empirical method (Wagner & Hayes, 2005). For the most part, SRT research tends to focus on the individual representation of phenomena through the use of traditional social scientific methods such as interviews and focus groups (Wagner & Hayes, 2005).

However, there is another way of thinking about social representations, which is to view the media representation of a phenomenon *as* a social representation. If we follow this notion of what a social representation is or *where* it is, it is legitimate to talk of the representation existing not *only* as a psychological construct shared in individual minds but also as existing somehow independently 'out there'. In other words, the media coverage is not simply reflecting the representation that *exists* somehow in many individual minds in a group, but rather the media's representation of a phenomenon is itself a reflector of a social representation. It is this latter conception of what a social representation is that informs the empirical work of this thesis. The reporting of EID in the newspapers is thus a valid object of study of social representations of these phenomena. An in-depth study of the media itself thus gives a great deal of insight into social representations.

In sum, from 1995 EID were pushed to the top of the news agenda by those US scientists who were intent on promoting the new concept. The mass media thus provided a bridge between those scientific understandings of the phenomenon (which are of course also social constructions) and lay representations that circulate in the culture and become accepted as 'common sense' knowledge. There are two ways of studying the media. One is to look at audience effects; the other is to examine produced 'texts' as naturalistic indicators of a particular world view. This thesis is rooted in the latter tradition and studies the mass media, which mediates science to lay people, using newspaper articles as source data. The rest of this chapter will thus explore in detail the rationale for

the choice of research methodology used in this thesis and describe how these criteria were applied to each of the case studies.

4.2 Research Design

The most important criterion in choosing a research method is that it is 'fit for purpose', or that the research design, data collection, coding and interpretation are indicated by the social phenomenon which is to be studied (Gaskell & Bauer, 2000). One has to consider the purpose of the study, how it will be structured and what are the fields for responses; how the sample is chosen; and how the data is to be interpreted (Usher et al., 1997). However, the choice of method for any research project is not made purely on the basis of what would provide the best answer to the question posed. Practical considerations must also play a large part in the choice of methods. Such practical considerations will include available time, available resources, time-frames, ethical considerations and so on.

Traditionally in much social scientific research, qualitative research has only been used in an exploratory (pre-design) stage, for example in designing survey questionnaires which would then be analysed using statistical methods. More recently, qualitative methods have been used in social research after a quantitative survey to support its interpretation. More extensive designs consider two parallel streams of research, both quantitative and qualitative, either simultaneously or in sequences. The idea of qualitative research as a self-contained research strategy with no connection to quantitative research is a

more recent phenomenon, but one which is now widely established. The research reported in this thesis uses content analysis, which is traditionally seen as a quantitative method, although in this context it is used qualitatively.

This thesis examines British newspaper reporting of three EID in the period 1986 to 2005. The Severe Acute Respiratory Syndrome (SARS) outbreak in 2003 was chosen partly because it unfolded 'in real time' while the thesis was in the early stages and as such allowed for a comparison of reporting of the ongoing epidemic with the existing literature on representations of Ebola. The 'mad cow disease' story, which spans the period from 1986 to the 1996 announcement of the link between BSE and *variant Creutzfeldt-Jakob Disease* (vCJD), was chosen as the next case study because it provided something of a contrast to SARS. The story unfolded slowly and over a longer period, and unlike SARS and Ebola which were 'far-flung', 'mad cow disease' could not be distanced by a British reader in the same way. Also, in terms of the impact of EID on faith in 'expert' authority, mad cow disease potentially provided a great deal of interesting material. Finally, the so-called 'superbug' story of *methicillin resistant staphylococcus aureus* (MRSA) was chosen because again it was very topical when the thesis was being written and seemed to provide another example of the way that the misuse of technology was implicated in the emergence of a new threat. All three epidemics were also chosen because, unlike AIDS and Ebola, there was little existing empirical work on their representations in the media.

There are several strategies one might adopt when conducting research into newspaper coverage such as this (see Krippendorf, 1980). This research examines the phenomena in question from a number of different perspectives. Firstly, it examines the coverage of EID in the newspapers, taking the increased coverage as an imperfect but nonetheless useful marker signifying the way that scientists push their agendas into the realm of the media and thus create public interest and alarm. The topic then becomes more newsworthy and thus garners more coverage *as a result of the public interest in it.* This strand of the thesis thus connects to the concerns of science and technology studies in that it looks at the news coverage of science stories, in this case a novel strand of biomedical discourse. Secondly, from a social psychological perspective, this research constructs a text corpus to pick up trends and changing patterns in social representations of EID. It does so in two respects: firstly in that it examines the coverage of the same diseases longitudinally over time (at least in the cases of 'mad cow disease' and MRSA) and secondly as it examines the development of the coverage of the class of infections categorised as 'emerging' over the period 1986 to 2003. Finally, and to a lesser extent, this research makes comparisons between different newspaper sources (broadsheet and tabloid) and examines the differences between Left and Right leaning newspapers and between medical journals and their coverage in the mainstream press.

The focus of research is on social representations of EID in Britain only, rather than from a trans-national comparative perspective. One of the means by which individuals collectively cope with novel threats, such as the threat of new

epidemics of disease, is through the mechanism of *othering,* which functions to solidify group identity by negatively associating the characteristics of the *other* with the blame for the new threat (Douglas, 1992; Joffe, 1999). One reason for the focus on British newspapers is that one can thus identify the social, geographical and symbolic location(s) from which boundaries are drawn between self and *other.* In order to do this, the research has to be 'located' in some particular geographical or social 'place'. The choice of newspapers sampled differed between the three studies. This was primarily for pragmatic reasons, as the same newspapers were not all available to download from the on-line archives for the whole period, particularly in the case of the 'mad cow disease' story, which begins in the 1980s. See Appendix (ii) for the dates at which different newspapers were available. The choice of which newspapers to sample was therefore carried out on different criteria of 'representativeness', which will be explained in more detail below.

A content analysis of the sampled newspaper articles was carried out for the three EID chosen. There are several different types of research designs using content analysis: the simplest and least interesting is a purely descriptive study that counts the frequency of all the coded features of the text; then there are normative analyses that make comparisons with standards, for example 'objective' or 'unbiased' reporting; cross-sectional analyses compare texts from different contexts, for example two different newspapers covering the same story; longitudinal analyses compare the same context over a longer period to detect fluctuations in content; more elaborately, studies may act as cultural indicators, considering several contexts over many years; finally, the

most ambitious are parallel designs involving longitudinal analyses in combination with other longitudinal data from opinion polling or repeated waves of unstructured interviewing (Bauer, 2000). In terms of this schema, the research reported in this thesis is both cross-sectional, in that it compares coverage of the same diseases across several newspapers, and longitudinal, in that it compares coverage of two of the three diseases studied over 10 year time frames. A further element of longitudinal comparison is introduced at a meta-level in that the whole thesis examines the development of the category of EID over a 17 year period, from 1986 to 2003.

SARS

SARS was the first of the three cases studies carried out for this research. It was the most straightforward as the story spanned a relatively short period, from the middle of March to the beginning of July 2003. Thus, unlike the subsequent two case studies, there was no opportunity to track any changes in the reporting over any significant length of time. SARS was first reported in the British newspapers on Sunday the 16th March 2003. In the weeks that followed there were an increasing number of newspaper articles (up to a peak of 182 on April 25th), although interest tailed off after a point. See Fig. 1 of this Chapter.

Bauer & Aarts (2000) suggest a stepwise procedure in establishing such a sample: first to select preliminarily; then to analyse the variety; and finally to extend the corpus of data until no additional variety can be detected. A

preliminary examination of the news sources revealed that many of the articles that mentioned SARS, particularly in the daily newspapers, were short one- or two-paragraph items. These reported, for example, whether a suspected case of SARS in Britain had been confirmed or that boarding school children returning from Easter holidays in Asia to Britain had had difficulty re-entering school. Secondly, the preliminary examination of the news coverage also revealed that after the first four weeks the dominant themes in the reporting became embedded and few new themes emerged after that. In qualitative research one needs to consider the size of the corpora. Variables in delimiting corpora size include the effort involved in data collection and analysis, the number of representations one would like to characterise and some minimal and maximum requirements. If one collects more material than one can analyse then this leads to the materials not being analysed in any great depth. The stopping criterion is *saturation,* namely one searches for different representations until the inclusion of new strata no longer adds anything new (Bauer & Aarts, 2000). Thus the point of *saturation* was here taken to be four weeks following the first reporting of SARS.

The most crucial moment in the development of a social representation is when the phenomenon in question is new, and several novel and sometimes abstract concepts have to be explained to a public who will be unfamiliar with them. Therefore the initial period of the reporting was the point of interest here. For the SARS case study, this research therefore considered the first four weeks following March 16th 2003, so as to examine how the initial responses to this new threat were articulated.

'Mad cow disease'

The 'mad cow disease' story is a long and continuing one, with the main events in this analysis spanning the years from 1986, when the first cattle started to fall ill, to 1996, when the British government finally admitted that the rise in young people with a variant of CJD was probably linked to eating BSE infected beef.

When examining the media coverage of an epidemic such as SARS which unfolds over a period of weeks or a few months, it is possible to sample at regular intervals over the whole period of the epidemic from its first appearance in the media to the end of the coverage, (see for example Joffe & Haarhoff's (2002) and Ungar's (1998) research on the media coverage of the 1995 Ebola outbreak). However, this was not practical in the case of 'mad cow disease' as the period of interest covered 10 years, and the sample size would have been too large, even if only one or two newspapers were chosen, which in itself would have prevented any meaningful comparison.

Again a preliminary examination of the data sources was undertaken, and the existing literature was also referred to in order to map out the history of the epidemic (Dealler, 1996; Lacey, 1994; Miller et al., 1998; Pennington, 2003; Rhodes, 1997). This preliminary investigation revealed that there were two major events in the 'mad cow disease' story: firstly, the initial reporting in the national newspapers in 1986 that cattle were dying of a new disease and

secondly the reporting in 1996 of the announcement of a human form of BSE, namely vCJD. However BSE was seldom out of the news for any length of time between those two events. The central question that was being asked from at least 1989 was 'Is beef safe to eat?' There was a particularly important moment in the middle of 1990, when a domestic cat was diagnosed with feline spongiform encephalopathy (FSE) and following which there was a government campaign to reassure the public.

If a random regular sampling of news coverage had been used as the criterion here, say for example, selecting news coverage on every 15th day of the month over the 10 years in question, then most of the important reporting of the story would have been missed. Therefore, in order to examine news coverage over this ten year period, three temporal 'snapshots' of newspaper coverage were chosen, again to try to reflect the most important developments in the story as events happened and to try again to capture the novelty in the representations of this disease, as perceptions of risk changed at these three important moments.

The first mention of this new disease in cattle, already labelled 'BSE', in the three newspapers chosen was in *The Times* of 29th December 1987 (see below for further details on the choice of newspapers and its rationale). Perhaps surprisingly, following this first article there are no articles on BSE in any of the sampled newspapers until June 1988. There was a steady trickle of articles about BSE over the subsequent twelve months following an announcement in *The British Medical Journal* of 3rd June1988 that 'food sold in the UK may be

contaminated with a brain disease caught from infected cattle' (Erlichman, 1988a) 04/06/88 *The Guardian.* So taking *The Guardian* article of 4th June 1988 as the starting point of the coverage, in the sense that the story slowly begins to gather momentum from that point on, this 'snapshot' covered the period of the from the from the 29th December 1987 to 4th June 1989.

The second snapshot chosen centred on events in May 1990, during which there was intense media interest in the BSE story and there were several important events. On 11th May the first cat death from Feline Spongiform Encephalopathy was confirmed. This was a particularly significant event because it showed that the pathogen could jump species, and the government had to reassure the public following the media interest it generated. Part of that reassurance involved John Gummer, the then Secretary of State for Agriculture, giving his six-year-old daughter Cordelia a beef burger in front of media cameras on 16th May 1990. This story and the reassurance that followed it led to a peak in the number of stories about BSE. Therefore the second 'snapshot' sampled is of the coverage of the week commencing Wednesday 16th May 1990 to Wednesday 23rd May 1990 inclusive.

The third period centred on the announcement in 1996 that reported cases of new variant CJD were indeed linked to BSE. There was no mention in the sample of the vCJD link announcement until the day when the then Minister of Health Stephen Dorrell made the announcement to the House of Commons, when the headlines (of the 20th March) state that government is to admit the

BSE / vCJD link today. The following day and for the rest of that week the newspapers were full of coverage and analysis of the announcement. The third 'snapshot' therefore is of the same three newspapers in the week following the leak of the announcement on the 20th March 1996.

The 'hospital superbug' MRSA

For the MRSA case study, a review of the literature was carried out to try to locate the main time frame of interest. This literature included general medical texts, (Day, 2001; Hughes & Anderson, 2001), popular science books (for example Cannon, 1995; Levy & Fischetti, 2003) and government reports (Department of Health, 2004; Jones, 2004). Again a preliminary overview of the available data was made. This revealed that before 2000, there was very little media coverage of the story, with occasional peaks of less than five articles each in the coverage in the newspapers chosen (again see below for the choice of newspapers and its rationale). However, after 2000 the media interest in MRSA starts to gather pace and there is a significant peak in the reporting in the period just before May 2005. The graph in Fig. 2 of this chapter shows that the number of articles that mention MRSA has increased steadily over the 10 years between 1995 and 2005, peaking in the lead-up to the British general election in May 2005. The two graphs below show how the steady increase in cases of MRSA in England and Wales over the 10-year period (Fig. 3 of this chapter) is reflected in the newspaper coverage of a selection of national newspapers (Fig. 4 of this chapter) up to mid 2004, after which time the issue

became politicised in the run-up to the May 2005 election and media interest peaks dramatically.

The time frame chosen for this case study was therefore from the 1st May 1995 to 30th April 2005. There were two reasons for this choice. First the data were sampled and coded in May 2005, so a cut-off point before that was necessary and a 10 year period gave a long enough historical sweep to track the representations of MRSA from its early days, when there was very little known or written about it in the newspapers. The other reason was that there was a general election in Britain in May 2005, and as will be seen, MRSA had played quite a prominent role as a health issue in the campaigning for that election.

In sum, the rationale for the choice of research design for this thesis was that it allowed a detailed examination of how epidemics of EID were covered in one part of the British mass media. Newspapers were chosen pragmatically, as they are easy to access and newspaper coverage is already widely studied in the existing literature, both within and without the SRT framework. By covering several different epidemics, it was possible to make a comparison of the reporting among them. Finally, where possible, by studying the diseases over many years, it was possible to track the changes that occur both in the representations of the individual diseases, as well as in the category of 'emerging infectious disease'.

4.3 Sampling and data collection

Having decided on an examination of newspaper reporting, the next consideration is which titles to include or exclude and what size of sample (i.e. how many articles) one should consider as fit for purpose as well as which criteria one should use to select that sample. Rather than selecting evidence on the quantitative model of statistical random sampling, Bauer et al. (2000) argue for 'corpus construction' as an alternative principle for data collection in qualitative research. Statistical research has established random sampling methods, and similarly, corpus construction means selecting systematically, but to some alternative rationale to the random sampling used in quantitative methods. Sampling units in qualitative research are usually physically defined as a newspaper, a book etc. There are several possible strategies. Statistical sampling provides a rationale for studying a small number of texts and still drawing conclusions about the whole collection of texts on the model of quantitative methods. Often it is easier to sample newspaper issues and take all the relevant articles in any one issue. Finally, by randomly selecting calendar dates of newspaper coverage where articles are the unit of analyses, one would make a cluster sample.

Although Bauer et al. (2000) argue against using the same day of the week as a sampling strategy in constructing a corpus of newspaper coverage, in the SARS and MRSA cases, the Sunday newspapers were chosen because in comparison with the daily editions of the national newspapers, the Sunday editions have more space for longer analysis and background articles. They are also particularly useful because they tend to cover all the stories that have made news in the previous week, and as such act as a barometer of the week's news

in a way that a randomly chosen daily edition, say Wednesday editions of a particular newspaper, would not. The journalists writing the Sunday articles are the same as those who contribute to the daily editions; the editorial line is the same in both the Sundays and the dailies; and they are written with the same readership in mind in terms of politics, social class and level of education.

From the perspective of the analysis here, these longer pieces available in the Sunday newspapers were often more descriptive, explanatory and sometimes polemical or simply lurid. The Sunday national newspapers in Britain (*The Independent on Sunday, The Mail on Sunday, The News of the World, The Observer, The People, The Sunday Express, The Sunday Mirror, The Sunday Telegraph* and *The Sunday Times*) represent a broad spectrum of political viewpoints from Left to Right, as well as a spectrum of 'highbrow' to 'lowbrow' viewpoints (broadsheet to tabloid). They therefore provided more material to analyse in terms of the social representation of the phenomenon in question.

This research uses the potential of the relatively new full-text database service *Lexis-Nexis*, which is the most comprehensive source for news coverage and other information currently available. The database allows one to search by key words delimited by specific newspaper titles. Through the analysis of a large sample of documents that this relatively new technology allows, it is possible to track and follow changes in emphasis and themes over long periods of time and across several sources (Altheide, 2002). As Bauer (2000) points out, the Internet and on-line archives for newspapers, radio and television programmes

have created a window of opportunity for text as data, and as the effort of data collection is tending to zero, there is a renewed interest in content analysis and its techniques, particularly computer assisted analysis. Of course, access to such a Pandora's Box of data presents its own, novel methodological concerns, namely how to sample from such an enormous potential resource. The other side-effect of the introduction of this information technology into qualitative research is that it increases the 'stakes' insofar as what would have been considered a reasonable sample of newspaper articles when one had to access a microfiche archive is clearly no longer acceptable when one can access and process data relatively easily.

Apart from the qualitative analysis that *Lexis-Nexis* allows through accessing the full texts of articles, it is also possible to enumerate the numbers of articles on a given topic. Therefore in all three cases, a simple count of the number of articles containing the search terms was carried out. In the SARS case it was possible to do this on a daily basis, but in the subsequent two case studies, the numbers of articles per month was counted, a not inconsiderable task over a 10 year period. These numbers were entered into a Microsoft Excel spreadsheet and simple graphs of the fluctuations in media coverage were drawn from this data. This was useful to this research project in two respects. Firstly, in the preliminary scope for the time-scales for the stories it was possible to see when the stories were given considerable attention in the news and then relate this back to the events that caused the increases in coverage, such as the flurry of media coverage of 'mad cow disease' in 1990 following the death of a domestic cat from a BSE-related disease. In the MRSA case it was also

interesting to look at the numbers of cases of the infection reported in Britain in the same period to see what relationship there was, if any, between the numbers of cases and the amount of news coverage about MRSA. This comparison of media coverage with cases of the disease was not carried out for the other two case studies, because the reported cases were so low in Britain (four cases of SARS and only a handful of confirmed cases of vCJD up to 1996) that making a graph of the cases to compare with the reporting would not have depicted any useful information.

Sampling and data collection for SARS

The sample for the SARS case study was all the articles that mentioned SARS in all the British Sunday national newspapers, both broadsheet and tabloid. Often, similar research on newspaper coverage of scientific issues focuses on 'opinion leading' newspapers, namely the ones that journalists and politicians are most likely to read (Bauer, 2000). Whilst this strategy has its obvious attractions depending on the research questions posited, this research was trying to examine the social representations of these new diseases and the tabloids were thought to be an important source of social representations. For example, although the origin of the terms 'mad cow disease' and 'superbug' is unclear, they are most likely to have originated in the tabloids, or at least to have been made common currency in tabloid reporting. Another important point is that the tabloids have a much wider readership: in Britain there are five million tabloid readers in comparison to half a million broadsheet readers (Gregory & Miller, 1998). In fact, Britain has among the highest newspaper

readership rates in the world, with approximately 67.8% of British people reading a daily newspaper: 56.5% of Britons read a national newspaper (11.6% broadsheet readers, 15.3% middle-brow tabloid readers and 29.6% red-top tabloid readers); 11.2% read a local newspaper and 32.2% are non-newspaper readers (Chan & Goldthorpe, 2006).

Therefore a search was carried out using *Lexis-Nexis* with the search term 'SARS'. The full texts of all the resulting articles about SARS in the British national Sunday newspapers for the five Sundays following the first reports of SARS (16th March to 13th April 2003 inclusive) were downloaded from the *Lexis-Nexis* news service on the Internet (n=74 articles: n=4 on 16th March, n=11on 23rd March, n=6 on 30th March, n=29 on 6th April and n=24 on 13th April.)

At this stage of the research it was also felt important to examine the original sources of the social representations, namely the biomedical literature. Journalists look for stories in a variety of places, and peer reviewed journals are frequently used as they are reliable so the journalist does not have to leave their desks to check the facts (Gregory & Miller, 1998). More specifically, research has shown that British medical journalists rely almost exclusively on *The British Medical Journal* and *The Lancet* as the source of their stories (Bartlett et al., 2002; Entwistle, 1995). Therefore, all the articles and editorials on SARS from *The British Medical Journal* and *The Lancet* for the same four week period following the announcement of SARS were also downloaded as full text from the journals' Internet sites (n=16 articles). However, the SARS

case study generated sufficiently rich data and results from the newspaper reporting alone to examine the social representations confidently. Therefore in the following two case studies, the biomedical journals' stories as sources were not included in the samples.

Sampling and data collection for 'mad cow disease'

For the 'mad cow disease' case study, it was not possible to use the same sampling strategy as for SARS, as the story began in 1986, and not all the British national newspapers were available to download from *Lexis-Nexis* from that period (see Appendix ii). Therefore three British broadsheet newspapers that were available for the whole period in question were chosen for the sample: *The Times, The Sunday Times* and *The Guardian.* In light of the discussion above on how the Sunday editions reflect the dailies, one limitation of this choice is that the editorial line of *The Times* is over-represented. The reason for the choice was partly pragmatic, but also these three titles give a reasonably broad range of political shades of opinion: Left / liberal for *The Guardian* and Right / conservative for *The Times* and *The Sunday Times*. The inclusion of a Sunday newspaper is also significant, for the reasons outlined above. What this study unfortunately lacks as a result of the availability issue is a tabloid perspective. A search was carried out using *Lexis-Nexis* on the search terms 'BSE' and 'mad cow' and all the articles that contained these phrases that appeared in *The Guardian, The Times* and *The Sunday Times* were downloaded for each of the temporal 'snapshots' chosen as indicated above. The dates of the three 'snapshots' and the number of articles sampled in each

was as follows: Snapshot 1, 29th December 1987 to 4th June 1989. (n=40 articles); Snapshot 2, from Wednesday 16th May 1990 to Wednesday 23rd May inclusive (n=38 articles); Snapshot 3, the week following the leak of the announcement on the 20th March 1996 until the 26th March (n=104 articles).

Sampling and data collection for MRSA

For the MRSA case study, a combination of the two sampling strategies used in the two studies above was utilised: Four British national Sunday newspapers were chosen to reflect the political spectrum and the highbrow / lowbrow spread of the British newspapers, again partly chosen because these titles were available as full text from *Lexis-Nexis* for the full period in question. They were: *The Observer* (Left leaning broadsheet), *The Sunday Times* (Right leaning broadsheet), *The Sunday Mirror* (Left leaning tabloid) and *The Mail on Sunday* (Right leaning tabloid) over this 10 year period from 1st May 1995 to 30th April 2005 as described above. There were originally 303 articles in the sample, although once duplication of articles for Scottish, Irish and Welsh editions of the newspapers were extracted the sample size was n=227 articles. As this sample was much larger than that for the other case studies, and in order to ensure that changes in emphasis over the 10 year period were not lost, this large sample was split into four smaller files: the first covered the period from 8th December 1996 to the 28th April 2002 (n=44 articles); the second covered the period from 12th May 2002 to the 25th April 2004 (n=41 articles); the third covered the period from the 2nd May 2004 to the 24th October 2004 (n=67 articles) and the final covered the period from 14th November 2004 to

the 25th April 2005 (n=75 articles). The data from these separate files has been reported in table 3 of this chapter and it gives a guide as to the themes that were more or less important in these different periods.

In sum, there are three problems of sampling: its representativeness, the sample size and the unit of sampling or coding (Bauer, 2000). Problems of representativeness are normally defined by the research problem, in this case the samples for the different media stories were chosen on the basis of a) the time frame of the story; b) the availability of newspaper archives for the time frame; c) the need for a mix of different newspaper sources, as far as possible reflecting different political and socio-economic viewpoints; and d) pragmatic reasons, on the basis of which Sunday or daily editions of newspapers were chosen. The sample sizes were 90 newspaper and journal articles in the SARS case, 182 articles over three temporal 'snapshots' for 'mad cow disease' and 227 articles for MRSA. These corpora were felt to be manageable, both in terms of being small enough to allow detailed analysis and in being large enough, given the power of *Lexis-Nexis* and the ease of data collection, to allow for an in-depth analysis of the development of the media coverage over time. The sample unit was defined as the newspaper articles on the given topics. The method of coding is described in the next section.

4.4 Coding

Once the samples were collected and downloaded, they had to be coded in order to make it possible to look at how themes tracked across different sources

and time frames in light of the research questions. Keeping track of emerging ideas, arguments and theoretical concepts across numerous documents can be a mammoth organisational task. To computerise such tasks, a non-formatted textual database has to be built up. Standard software packages like word processors do not usually support the techniques of data management that are needed to structure such databases such as: the definition of pointers containing index words; together with the 'addresses' of text passages which can then be used to retrieve indexed text segments; and the construction of electronic cross-references with the help of so-called hyper-links (Kelle, 2000). Over the past 10 years or so, computer-aided qualitative data analysis (CAQDAS) software has become widely available. Such a software package, in this case *Atlas/ti,* was used in the coding of the data in this research.

However, 'computer-aided qualitative data analysis' is something of a misnomer if one imagines that a software package is capable of performing qualitative analysis in the same way as SPSS can perform analyses of variance (Kelle, 2000). What CAQDAS can do is to enable tagging, coding and indexing of texts, thereby supporting segmentation, linking, ordering and reordering, structuring and the search and retrieval of texts for analytic purposes. Most CAQDAS programmes support this process of categorising and comparing text segments by offering code and retrieve facilities.

There are many benefits to using qualitative research software. Firstly it allows for greater efficiency because it mechanises cumbersome tasks such as searching and coding text segments. This in turn leads to saved time and can

lead to larger samples being analysed. Although this in itself does not imply that research findings will be more valid, 'multiple comparisons between purposefully selected cases are crucial for a qualitative study to identify patterns and to develop categories. An increase in sample size may therefore add greater breadth to the scope of the analysis' (Kelle, 2000: 293). Secondly, the use of software packages can make the research process more systematic and explicit, and therefore more transparent and rigorous, enabling researchers to codify exactly how they analysed their data. Finally, by releasing the researcher from repetitive and monotonous tasks, software can allow more time for the researcher to 'play' with the data and thus enhance creativity (Kelle, 2000). However, having said all this, content analysis remains an act of interpretation (Bauer, 2000). The increased amount of data manipulation that CAQDAS makes possible in comparison to manual paper-based methods means that the breadth and sophistication of the analyses carried out would be expected to be greater.

The coding frame provides a systematic way of comparing with a predefined set of alternatives. The coding frame used consisted of a list of potential themes, and the text was assigned codes based on when the text 'fitted' the theme as summed up by the code. In other words, there were no sub-codes within the codes such as 'panic: increasing / diminishing'.

Once the text files had been uploaded into *Atlas/ti* as 'hermeneutic units', the whole text corpus was read through once to get a feel for the data. After this, coding was carried out and the text corpora were re-read closely and codes

assigned to relevant quotations which were highlighted in the text. Only one occurrence of a code was allowed in each article. So for example, in the MRSA case if an article began with a description of unhygienic hospitals, then discussed the genesis of MRSA, and then returned to the subject of hygiene in hospitals, then only one occurrence of the code *unsanitary conditions* would be given. If several occurrences of the same code had been allowed in the same article, then it would have skewed the analysis in that it would have seemed as though there were more articles referring to *concealment* or *unsanitary conditions* than had in fact been the case. One of the potential methodological weaknesses of this study was the lack of a second coder to ensure reliability. If resources had been available it would have been ideal to get a second person to code part of the data and to reach agreement.

In the initial part of the research, the SARS case was based on a comparison of the SARS reporting with previous research on Ebola (Joffe & Haarhoff, 2002; Ungar, 1998). Although the coding frames for this previous work were not explicitly set out in a table in either of these papers, it was possible to reconstruct an initial working coding frame based on the themes that proved important in both these papers. As the coding of the SARS reporting progressed, new themes emerged and were included as the coding proceeded.

In the second case study, on 'mad cow disease', the initial coding frame was based on the SARS case study. Again, as the coding proceeded, the codes were modified to fit the data. So for example the code *difficult to catch,* which had been a recurring theme in the Ebola and SARS coverage, was modified to

reassurance / little or no threat to human health, which better reflected the early BSE news coverage. Some codes that were imported from the Ebola and SARS research were not used at all in the 'mad cow disease' study (for example *patient zero*) and new codes were added as necessary (for example *British beef is the best in the world*). The code for *panic* was applied to a quote when the word 'panic' (or 'anxiety' or 'hysteria / hysterical') was used in the text in any context and also when the story was for example about what were described as 'panic measures' such as banning beef; or when there were predictions of the ruin of various industries and economies.

Similarly, for the final case study on MRSA, the coding frame was imported from earlier work on 'mad cow disease' and was again adapted as necessary to fit the specifics of the MRSA case as the coding was carried out. Some codes were not used in the MRSA case as they were specific to the BSE story, other codes were added: for example *National Health Service cuts, Third world conditions, bring back matron, political measures, personal measures.* Other codes were amended to fit the MRSA story: *graphic descriptions* became *graphic descriptions / human interest.*

In sum, this research made use of the potential of two relatively new information technology innovations to perform the data collection and coding for this research, namely full text newspaper archives from the Internet and CAQDAS software. The coding frame was based on earlier research, which offered a useful comparative starting point for this research. However, as the research progressed, the coding frame was adapted to fit the new data and new

emphases of the different reporting. These changes in the coding frame can be seen in table 4 of this chapter, which offers a comparison of the different coding frames used. Once the data collection and coding was completed, the results of the coding were written out as plain descriptive prose into a word processing document. This document described which the most and least important themes were and how these themes changed in emphasis over the different periods within the time frame. The document also included examples of long illustrative quotes from the newspaper texts (and their full references). The results were then ready to be interpreted and analysed.

4.5 Interpretation

At this stage the results of research were written into a fairly bland descriptive document. The next stage of the research involved a move from this rather mechanistic and methodical account of the data to a more creative act of interpreting those results in light of the theoretical framework that formed the underpinnings of the empirical work, and of course the research questions.

Coding and therefore classifying the sampled materials is a constructive task that brings together the theory and the research material. The strengths of content analysis are that is systematic and public, it mainly uses 'naturally' occurring raw data that have been created for other purposes, such as the newspaper texts used here. As such it is unobtrusive; it can deal with large (sometimes overwhelmingly so) amounts of data; it lends itself to historical data and it offers a set of well documented procedures (Bauer, 2000). But the

weaknesses of content analysis are that by separating units of analysis one may introduce inaccuracies of interpretation. This pitfall has been borne in mind throughout the interpretation of the data described here. Citations out of context can easily be misleading, thus in this research many verbatim quotes from the newspaper articles are included as a quality indicator. Such *thick descriptions* enable the reader to draw their own conclusions regarding any interpretations made (Gaskell & Bauer, 2000). Another potential problem with content analysis is that as it tends to focus on frequencies, one needs to bear in mind the rare and the absent. Thus, as important in the interpretation of the data here were the absences of particular themes. Thus the absence of themes that one might have been expected to be present given the existing literature and the other case studies are also discussed and interpreted in the chapters that follow.

In sum, the interpretation of the results of the coding was the final and most creative element necessary in order to understand the meanings embedded in the media coverage of the three disease epidemics. The results were rewritten and important and interesting points drawn out in light of the theory outlined above and in light of the original research questions. This involved stepping back from the minutiae of the data and the coding and putting the results into the wider perspective of the overall aims of the thesis.

Conclusion

This thesis set out to examine the phenomenon of emerging infectious diseases. This phenomenon was novel in two senses: one was that the category was

newly minted in 1989, and had gained widespread currency only by 1995. The other was that the diseases themselves were also 'newly emerging'. The research questions were how these diseases were described, who or what was felt to be at risk from them and who or what was held to blame. The rationale for the choice of research design for this thesis was that the mass media formed the most important link in the way that knowledge about these new diseases moved between the scientific and lay realms. Therefore the research reported here focused on the media coverage of them rather than on audience reception of those messages. National newspapers were chosen as an important source of information. Pragmatically, they are also easy to access and the existing literature on newspaper reporting of other health issues and other infectious disease epidemics allows for useful comparisons and the development of theory.

Three emerging infectious disease epidemics were chosen on the grounds that they had not been subject to similar study and that they posed different and interesting angles to the research questions. By covering several different epidemics over many years, a comparison of the reporting was possible between them as well as an examination of the development and influence of the category of 'emerging infectious disease'. The samples for each epidemic were partly dictated by the availability of newspapers in the period, as well as by considerations of representativeness in terms of tabloid and broadsheet. In some cases the Sunday editions were used as an indicator of the previous week's coverage in the corresponding 'sister' paper.

The data collection and coding of the empirical work took advantage of the convenience and power of relatively recently available information technological advances. Finally the results were interpreted in light of the theoretical insights outlined in chapter 2 and in terms of the initial questions. The process was iterative, and informed by both my PhD supervisors, as well as by the comments made and questions asked when I presented parts of this research at conferences, and in light of the comments made by reviewers when earlier versions of the work were submitted for publication. The following three chapters outline the story of each disease before examining the results of the data analysis in light of each of the research questions in turn. Each of the following three case studies ends with a discussion of the coverage of the particular disease in light of the theoretical framework outlined in chapter 2.

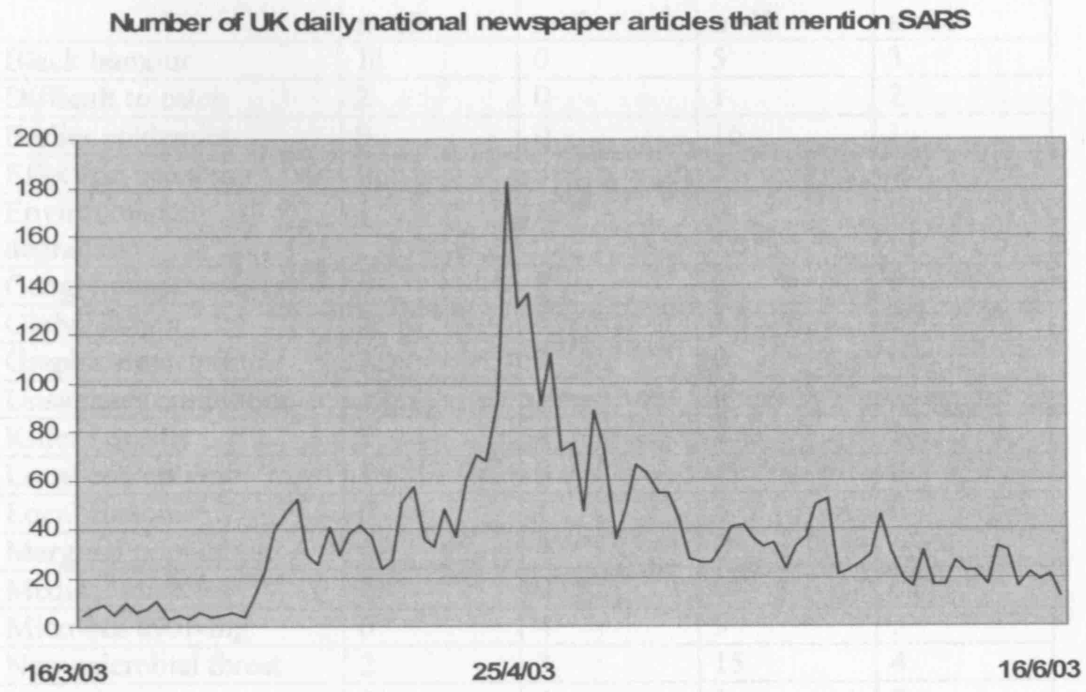

Fig. 1 Source: *Lexis-Nexis* Professional (http://web.lexis-nexis.com/xchange-international/)

Codes	Week 1/2 n=15	Week 3 n=6	Week 4 n=29	Week 5 n=24
Black humour	11	0	5	3
Difficult to catch	2	0	1	2
Earlier epidemics	0	0	16	1
Effect on economy	0	7	21	12
Environmental degradation	1	1	0	0
Geographically distant	6	0	2	0
Globalisation	2	3	5	2
Graphic description	2	0	0	0
Unsanitary conditions	14	1	6	2
Killer / deadly	1	4	7	3
Local corruption	1	8	4	0
Local customs	0	1	6	0
Marginal populations	0	0	0	0
Medical miracles	2	0	6	0
Microbes evolving	6	4	9	3
New microbial threat	2	3	15	4
Next plague	5	0	1	0
Passive locals	0	0	1	0
Patient zero	5	3	6	6
Population growth	0	1	0	0
Poverty	0	0	1	0
Travel	6	7	17	4
War	0	0	9	4
Western doctors	6	8	19	3

Table 1. SARS coding frame and occurrences of codes

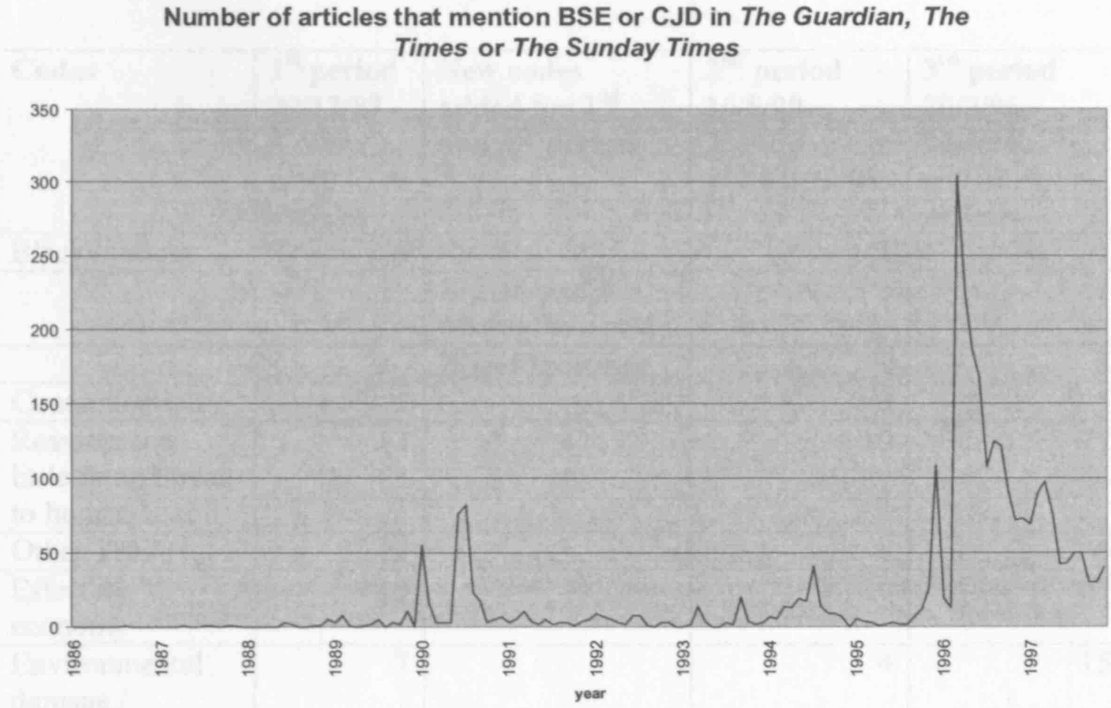

Fig. 2 Source: *Lexis-Nexis* Professional

Codes	1st period 29/12/87–4/6/89 n=40 articles	New codes added for 2nd and 3rd period	2nd period 16/5/90–23/5/90 n=38 articles	3rd period 20/3/96–26/3/96 n=104 articles
Black humour	5		1	1
		British beef is best in the world	6	1
		Bogus professor	9	5
Contamination	5		3	5
Reassurance / little or no threat to human health	12		10	27
Other TSE's	12		8	5
Effect on economy	10		10	57
Environmental damage / unnatural	7		4	15
Graphic description	3		1	4
Unsanitary conditions	1		2	0
Killer / deadly	5		0	0
Corruption / concealment	18		8	10
Medical miracles	1		2	0
Microbes evolving	3		2	0
Mystery / unknown	7		1	0
New microbial threat	4		2	1
Next plague	0		0	7
		Panic	19	18
Salmonella / listeria	13		10	7
Plucky doctors	3		4	0

Table 2. 'Mad cow disease' coding frame and occurrence of codes

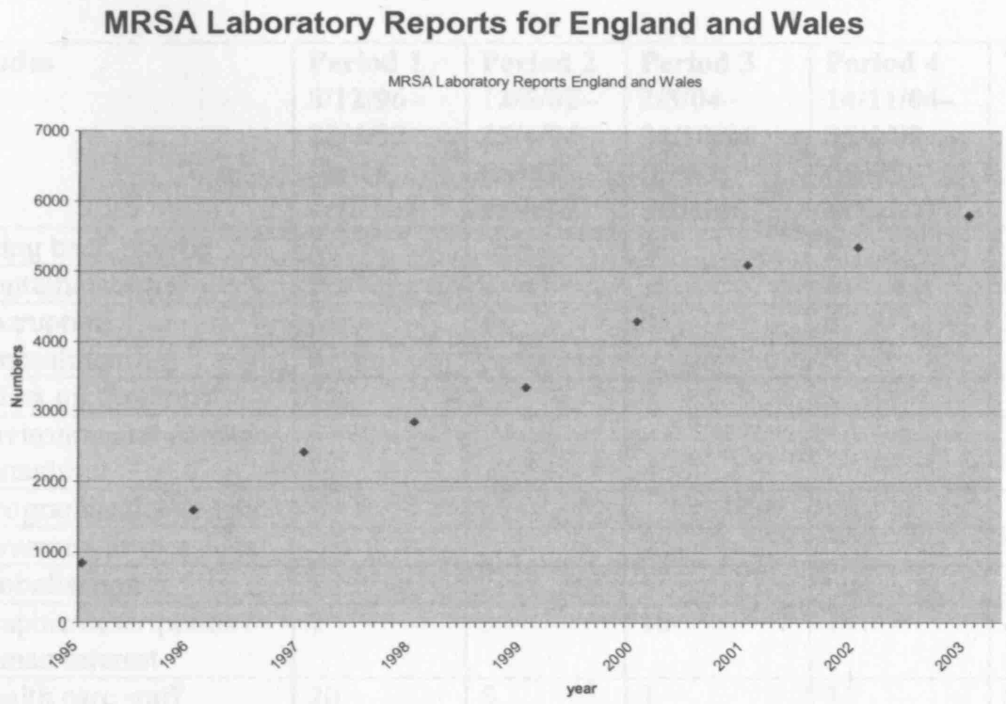

Fig. 3 Source: Health Protection Agency

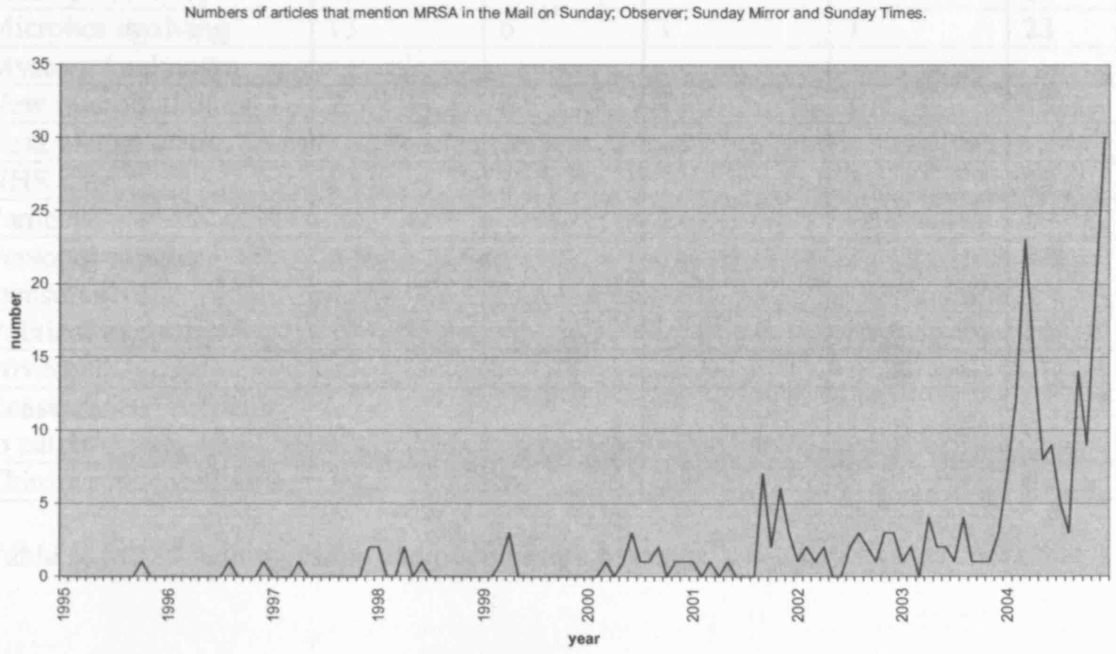

Fig. 4.Source: *Lexis-Nexis* Professional

Codes	Period 1 8/12/96–28/4/02 (n=44 articles)	Period 2 12/5/02–25/4/04 (n=41 articles)	Period 3 2/5/04–24/10/04 (n=67 articles)	Period 4 14/11/04–25/4/05 (n=75 articles)	Total
Bring back matron	4	2	4	9	**19**
Contamination	3	2		1	**6**
Corruption / concealment	4	4	8	5	**21**
Effect on economy					
Environmental damage / unnatural					
Geographically distant					
Government measures			7		**7**
Globalisation	1		1		**2**
Graphic descriptions / human interest	7	5	16	19	**47**
Health care staff	20	5	3	11	**39**
Unsanitary conditions	11	5	4	7	**27**
Killer / deadly				14	**14**
Local customs					
Marginal populations					
Medical miracles	10	6	2	2	**20**
Microbes evolving	13	6	1	3	**23**
Mystery / unknown					
New microbial threat	7	3	2	3	**15**
Next plague					
NHS cuts	17	3	1	7	**28**
Panic			1		**1**
Personal counter measures			7	2	**9**
Political measures				16	**16**
Poverty					
Reassurance / difficult to catch					
Third world conditions	3	1	2		**6**

Table 3. MRSA coding frame and occurrences of codes

Coding frame used for SARS	Coding frame used for 'mad cow disease'	Coding frame used for MRSA
		Bring back matron
Black humour	Black humour	
	British beef is best in the world	
	Bogus professor	
	Contamination	Contamination
Difficult to catch	Reassurance / little or no threat to human health	
Earlier epidemics	Other transmissible spongiform encephalopathies	
Effect on economy	Effect on economy	Effect on economy
Environmental degradation	Environmental damage / unnatural	Environmental damage / unnatural
Geographically distant		Geographically distant
		Government measures
Globalisation		Globalisation
Graphic description	Graphic description	Graphic descriptions / human interest
		Health care staff
Unsanitary conditions	Unsanitary conditions	Unsanitary conditions
Killer / deadly	Killer / deadly	Killer / deadly
Local corruption	Corruption / concealment	Corruption / concealment
Local customs		Local customs
Marginal populations		Marginal populations
Medical miracles	Medical miracles	Medical miracles
Microbes evolving	Microbes evolving	Microbes evolving
	Mystery / unknown	Mystery / unknown
New microbial threat	New microbial threat	New microbial threat
Next plague	Next plague	Next plague
		NHS cuts
	Panic	Panic
Passive locals		
Patient zero		
		Personal counter measures
		Political measures
Population growth		
Poverty		Poverty
		Reassurance / difficult to catch
		Third world conditions
Travel		
	Salmonella / listeria	
War		War
Western doctors	Plucky doctors	

Table 4. Comparison of three coding frames

Chapter 5 – The case of SARS

> When written in Chinese the word 'crisis' is composed of two characters. One represents danger, and the other represents opportunity.
>
> J. F. Kennedy, 35th US President, 1917-63

SARS seems to present an example of an emerging infectious disease *par excellence,* in that unlike MRSA or Multi Drug Resistant Tuberculosis (MDRTB), SARS is a truly new disease. It is also easily transmitted from person to person, highly infectious and often fatal. In these respects SARS seems to be analogous to Ebola, and therefore one of the initial starting points for this research was to make a comparison of the media coverage of SARS with previous work on media coverage of Ebola. Elements of Ungar's (1998) schema described above seem to fit the SARS case, insofar as there was a frenzy of media coverage of a disease that was 'far-flung' and from a British perspective affected mostly 'foreigners', in this case the Chinese, rather than Africans. Yet on the face of it there seem to be some important differences between Ebola and SARS, in particular the way that SARS affected the global economy and was facilitated by air travel, neither of which were features of the Ebola story, which was localised in both its cases of infections and its effects. The research described here then aims to discern whether or how much SARS was represented in the media as a threat in terms of Ungar's (1998) model.

The other initial point of interest in comparing media coverage of SARS to the existing research on Ebola was whether the same blaming mechanisms

pertained in both cases. As Ebola affected Africans, it was possible from a British perspective to distance the threat by blaming those affected for bringing the disease upon themselves because of their 'bizarre' customs, for example because of the way that corpses of people who had died of Ebola were prepared for burial (Joffe & Haarhoff, 2002). Therefore this research examines whether parallels from the Ebola literature can be drawn with the SARS case. Of particular interest was whether, or to what extent, anxiety about SARS was mollified as it was in the reporting of diseases like AIDS and Ebola by *othering* those affected by the disease and thus distancing the British reader from the threat.

This chapter examines the reporting of SARS in the British newspapers and British medical journals for the initial four-week period following its 'emergence'. The research questions addressed here are: How was SARS described in the newspaper reporting? Who or what was said to be at risk of the disease? Finally, who or what was held to blame for it? Firstly however, it will be necessary to give some context to the media coverage by recounting the story of the 2003 SARS epidemic.

5.1 The context of the study

SARS first came to the attention of the World Health Organisation at the end of February 2003 in Hanoi, Vietnam. Earlier that month, Liu Jianlun, a doctor from Guangdong province in China, had travelled to Hong Kong for a wedding and there had unwittingly infected other residents at the Metropole Hotel. They

in turn carried the disease to Vietnam, Singapore, Germany, Ireland and Canada (Baehr, 2006). By the third week in March, several hundred people were infected, with cases reported in Hong Kong, Singapore, Toronto, New Jersey, California and Bangkok (Zambon & Nicholson, 2003a). the World Health Organisation then took the unusual step of issuing a world-wide alert. SARS was first reported in the British newspapers following this World Health Organisation announcement on the 16th March 2003.

SARS is now known to be caused by the SARS corona virus (SARS-CoV). The majority of cases were adults, with children affected only rarely. The virus was capable of airborne transmission, which was one of the characteristics that facilitated its rapid spread (Bontzoriou & Politis, 2004). After infection, the mean incubation period was 2 to 7 days. This was followed in most cases by a period of high fever lasting 3 to 7 days, although some patients developed other symptoms during this phase of the illness, including headache and body aches, or more rarely diarrhoea or mild respiratory symptoms such as a dry cough. The initial mild period of the illness was followed by a period of breathlessness and chest pain. Most patients subsequently developed pneumonia, and around 15% of patients affected required artificial ventilation. There was a relatively high death rate, in the order of 5%. Nosocomial transmission was a striking feature of SARS, and even in the first Hanoi cluster, infection rates of 50% were reported amongst health care workers caring for patients with the syndrome (Zambon & Nicholson, 2003a).

One of the novel features of the global governance of the SARS epidemic was

that the World Health Organisation autonomously issued travel advisories against non-essential travel to specified affected countries and areas. These were issued directly to travellers, rather than by following the usual protocol of issuing recommendations through member states. These travel advisories were a radical innovation for the organisation, because its constitution does not authorise such a move without prior agreement of the countries concerned. By doing so the World Health Organisation exercised power against member states, resulting in political and economic damage. Although the states affected complained, particularly Canada, none publicly challenged the World Health Organisation (Fidler, 2004).

When the World Health Organisation issued a travel advisory against non-essential visits to Hong Kong and Guangdong on the 2nd April, the result was that from then until Hong Kong was removed from its list of SARS affected areas on 23rd June, the territory became an 'international pariah'. Tourism plummeted and hotel occupancy fell by 20% in April and May. Cathay Pacific, Hong Kong's flagship airline, which usually flies 33,000 people daily, was in April flying only 4,000 passengers a day. Workers were laid off as over 3,800 Hong Kong businesses folded between March and the beginning of June (Baehr, 2006). Apart from East Asian countries, the other place where SARS caused major problems was in Canada, where an outbreak of the disease in Toronto pushed the country's system of universal health care to the brink, prompting the Canadian government to later review the nation's public health policy and infrastructure (Fidler, 2004). A World Health Organisation travel advisory (after the time frame of the media sample used in this research)

against travel to certain parts of Canada caused Canada's economy to suffer as had Hong Kong's.

In Britain, although there were only four cases of SARS and no deaths, the media interest was nevertheless great. The SARS coverage in the British media reached a peak around Friday 25th April when 182 articles in the British national newspapers mentioned SARS. The reason for this spike of interest was that several news worthy events related to SARS occurred on that particular day: Dr Liam Fox, the then British Shadow Health Secretary, called for SARS to be made a notifiable disease, accusing the Labour Government of being 'feeble, complacent and irresponsible'; the World Health Organisation announced that travel restrictions to some areas affected by SARS would possibly remain for the forthcoming few weeks; the Organisation for Economic Co-operation and Development (OECD) predicted that SARS could lead to 'severe macroeconomic consequences' for Hong Kong and East Asia; the World Bank announced that it was lowering its forecasts for economic growth in East Asia because of the virus and finally the tabloids carried the story that television soap opera star Todd Carty had been admitted to hospital with 'mysterious SARS-like symptoms'.

After a period of rapid global diffusion and clusters of SARS infections, outbreaks were eventually contained through a combination of surveillance, quarantine methods and travel bans. After July 5th there were no new cases reported (Wallis & Nerlich, 2005). Although there may of course be a recurrence of SARS in the future, up to 11th July 2003, there were a cumulative

number of 8437 confirmed cases of SARS world-wide of which 813 were fatal. On 14th July, the World Health Organisation stopped publishing a daily table of the cumulative number of reported probable cases of SARS, (World Health Organisation, 2003a). Reflecting this, the media coverage tailed off after the end of April, and the by the middle of July the story was no longer newsworthy.

SARS undoubtedly presented a serious risk to human health in the *realist* sense, insofar as it was contagious to people in very close contact to an affected person (family members and health care staff in particular) but very much less infectious to people in ordinary social contact with someone with the illness. It was an illness that killed around 5% of those affected, mostly those with other underlying health problems, but which was very much less dangerous to those in the West who were well-nourished and in otherwise good health.

5.2 Results

How was SARS described?

In the very first reports of SARS on 16th March, all the articles referred to the new illness as a 'killer bug' or a 'mysterious', 'lethal', 'deadly pneumonia virus'. This new 'threat' was described as 'moving at the speed of a jet', and people affected were described as not responding to established treatments. Combined with adjectives like 'untreatable' were some graphic descriptions of the effects of the disease. The newspapers also conjectured as to the origins of

the virus, which was thought to be an influenza virus or a reappearance of the Hong Kong 'bird flu' (Highly Pathogenic Avian Influenza [HPAI] H5N1 strain), which had led to a cull of all poultry in the territory in 1997. The reporting also speculated on the outcome of the unfolding epidemic.

In the first two weeks of the newspaper coverage there were several stories about how this could be 'the next plague'. One by-line from *The Sunday Telegraph* of 23rd March sums this theme up:

> The next pandemic is now ready for take-off. The devastating effects of a mystery pathogen have given rise to fears of a modern-day black death. Doctors say it is not a question of if such a virus will emerge but when – and, ...millions of air travellers could spread it around the globe.
>
> (Fraser 23/03/03 *The Sunday Telegraph)*

Thus from the very outset SARS was framed as a threat on a par with serious historic epidemics of infectious disease. Other epidemics with death tolls in the millions were frequently cited, in particular the 1918 Spanish influenza epidemic and AIDS. But unlike these historical epidemics, which were characterised by their relatively slow march across the globe, the spread of this 'modern day black death' was predicted to be facilitated by the ease of modern air travel. By the first week in April, the framing of the new disease in terms of earlier epidemics of bubonic plague, cholera, smallpox, AIDS and others becomes a prominent feature in the reporting. For example one headline read 'SARS resembles the fatal flu virus of 1918'. These historical epidemics and their death counts were described in the newspapers, thus contextualising

SARS as a serious threat on a similar scale to these global pandemics.

An editorial in *The British Medical Journal* of 29th March set the tone for much of the newspaper coverage the subsequent weekend. 'Sudden acute respiratory syndrome', it stated, '*May be a rehearsal for the next influenza pandemic*'. The editorial began:

> Plagues are as certain as death and taxes. The optimism of the 1960s and 1970s has given way to a mature realism that the relationship between human beings and microbes is neither completely predictable nor biased in favour of humans.... The speed of travel favours intercontinental spread of disease. The rapid dissemination of sudden acute respiratory syndrome around the world should be considered a rehearsal for the next pandemic of influenza, as it shows what will happen with a new human virus spread by the respiratory route, with no vaccines and antivirals in limited supply.
>
> (Zambon & Nicholson, 2003b: 669)

Here we see two of the elements that were to be central to newspaper coverage throughout the early SARS coverage: *this could the next plague*, but immediately afterwards the reassurance that Western scientific biomedicine *can successfully contain it.*

Throughout the newspaper reports, there was speculation that the 'bug' (usually referred to by the second week as a virus) had 'mutated' from horses or pigs. This was frequently combined with explanations of how HIV was

believed to have 'jumped species' from monkeys. The themes of microbes mutating, evolving, of new microbial threats and how 'we are waiting for the next big one', become firmly established by the first week in April. A frequently recurring theme was that SARS could possibly mutate into a more infectious and potentially even more lethal form of the disease. China was said to be the source of so many of these epidemics because of its unsanitary conditions and its reliance on farming fowl, where influenza viruses are said to originate (although scientists were not sure at this point that SARS was either a zoonose or an influenza virus). Scientific theories as to what actually caused SARS were widely reported, although not with great clarity. Also reported were theories as to how SARS was being spread: whether by airborne transmission, by droplet or via the sewerage system.

As well as this alarmist set of themes, from the outset there was another set of more reassuring themes, which gained in prominence after the initial 'mystery' phase had passed. The newspaper reports thus also focus on how Western doctors and authorities were moving quickly and using their expertise to contain the threat or how British scientists were working 'flat out' to process samples sent by worried doctors who acted with 'military precision'. Apart from Hong Kong scientists and authorities, Chinese authorities were rarely mentioned.

By the 5th April Hong Kong scientists had discovered that the corona virus was responsible, findings which were corroborated by other, Western, scientists. These findings were reported in *The British Medical Journal* and *The Lancet,*

and this *disease detective* angle was picked up by the newspapers. By early April the second most frequently occurring theme (after the effect on the economy) was the role of Western doctors and authorities in controlling the epidemic and searching for its cause and cure. Scientists were mentioned by name in Winnipeg, Atlanta and London, often with the report that they were on the 'verge of a breakthrough' or that 'a test is only days away'. Because these are British newspapers, it is perhaps not surprising that they focus particularly on Dr Maria Zambon's work at the Collindale laboratory in North London:

> "It is like a detective game, only on an extraordinary international scale", she explained.
>
> In a week which has seen the number of cases leap fivefold, her efforts could not be more crucial. Dark lines under her eyes attest to the fact that Zambon, mother of a young son, has spent the last three weeks analysing data and looking at samples late into the night.
>
> (Revill & Aglionby, 06/04/03 *The Observer)*

This passage is noteworthy because of how Zambon is described in heroic terms, working through the night despite her family commitments, to solve this 'crucial' 'detective game'.

Virologist Professor John Oxford of the University of London was widely quoted in early April as saying that he didn't think that SARS would constitute a major epidemic, as it was geographically distant, difficult to catch and tended to affect adversely those whose immune systems were already compromised by the secondary effects of poverty. However, his reassurances were often

followed by death tallies from other past epidemics, and estimates that apart from the 2,409 cases by then confirmed, as many as another 24,000 could be spreading the virus. A few weeks later, after the time frame of this project, there were predictions that SARS could lead to millions of deaths.

SARS was thus initially described in the newspapers as a mystery, a 'killer', framed as a threat on a par with the Black Death and other similarly devastating historical epidemics. However these apocalyptic projections were almost immediately followed by descriptions of Western doctors and scientists, heroic *disease detectives,* who promised *medical miracles* to deal with the threat.

The risk of SARS to the global economy

If for the first few weeks of the SARS reporting the focus was on the mystery new illness, what it could be and how it could be stopped, then by the last week in March there was a marked shift in the coverage. Three strands of the story dominated: the first was the death from SARS of a World Health Organisation doctor; the second related to the effect that SARS was beginning to have on the local and international economy; and finally the reporting focused on Chinese corruption and inefficiency.

The first major story that appeared at the end of March was that of the death from SARS of Dr Carlo Urbani, an Italian communicable diseases clinician who worked in Thailand for the World Health Organisation. A World Health

Organisation press statement was released praising Dr Urbani and crediting him as being 'the first World Health Organization officer to identify the outbreak of this new disease' (World Health Organisation, 2003b). However, the newspapers truncated this report and credited him with being 'the first person' to identify the disease.

The second strand that had emerged by the end of March was the effect on the economy and on daily life, particularly in Hong Kong. There were descriptions of deserted shopping malls, cinemas and restaurants; cancelled concerts, sporting fixtures and other public events; of people wearing face masks in the street; and of the closure of banks and businesses. There was news of screening air travellers although as yet there was little mention of the effect of SARS on the travel industry.

The theme of the effect on the economy became much more prominent by Sunday April 6th, when the interest in SARS in the newspapers had increased greatly from the previous week. The economic effect was acute in Hong Kong, where spokespeople from major international banks such as Morgan Stanley and Goldman Sachs were warning that the epidemic could tip the whole of Asia, and subsequently the world into a 'global slowdown'. The staff of Western companies in China and Hong Kong were reported as having been ordered to stay home. By this point it was becoming clear that the other sectors of the economy adversely affected by SARS were the commercial airlines and tour operators. British Airways was one of several airlines that announced that it was cutting flights to and from Hong Kong, reflecting decreased demand.

Predictions were made on the business pages in particular that SARS could be the final straw for several airlines that were already in a weakened financial state following the war in Iraq.

By the fifth week following the World Health Organisation announcement (April 13th), the themes from the previous weeks became entrenched in the reporting and there were few new strands. The most frequently occurring themes by this point were the effects on the economy, which by this stage was more usually taken to mean the 'global' economy, rather than simply that of Hong Kong or East Asia. However, some human interest was added by stories of boarding school children either being kept in Britain, or quarantined on their return from countries affected by SARS. A royal angle to the story was provided by reports that Prince Harry's school, Eton, had banned pupils returning from the Far East.

Although the newspaper reporting regarding the real or potential risks that SARS posed was on the whole largely similar in tone, there was one notable exception in the sample. Of the articles sampled over those four Sundays, one piece, by David Aaronovich, from *The Observer* of the 6th April questioned the appropriateness of the current panic over SARS. In it, he wrote:

> EVER SINCE WE settled down in cities and communities, we have been open to the possibility of communicable disease. And, in our folk history, most of this arises in the East, a treacherous result of trade and modernity. The Black Death is supposed to have originated variously in the Gobi desert, in Manchuria, or (best of

all) 'in the depths of Asia', reaching Dorset in August 1348. The cholera pandemic that swept across England in 1832 was supposed to have entered on a ship from Hamburg, but to have started in Bengal. Latterly Africa has been fixed upon as an alternative starting place for terrible diseases. Teeming Asia or the Heart of Darkness – take your pick of which most frightens you.

This fear of epidemics and pandemics is interesting. In psychological terms it is a way of externalising evil and badness; the nastiness is placed outside us.

(Aaronovitch, 06/04/03 *The Observer)*

The risk of SARS was initially framed as a threat on the scale of 'the next plague', but almost immediately that threat was at least postponed by the promises of Western biomedicine to contain the epidemic. In the weeks that followed, the concerns about the potential risk to people (or at least the British reader) of being *infected* by SARS were replaced by the risk to the British reader of being *affected* by SARS as a result of damage to the global economy. Not all the coverage was similarly apocalyptic however and some commentators expressed cynicism about both the effects that SARS would have and about the blame that was being directed to China for the epidemic.

Who was to blame? – The threat of China

Throughout the sample the newspaper reporting laid the blame for SARS squarely at the door of the Chinese: This was either because Chinese

Communist Party officials were said to be corrupt and secretive, or else the blame was directed at certain (Chinese) individuals who were described as having unwittingly or carelessly acted as modern day 'Typhoid Marys' and spread the disease. Finally, the Chinese in general were blamed for SARS because of their 'bizarre customs', in terms of their culture, food or hygiene,

The theme of Chinese corruption and inefficiency was given a great deal of coverage in the newspapers, reflecting pieces in both *The British Medical Journal* and *The Lancet* of the 5th April complaining about the 'slowness' of the Chinese authorities in reporting the initial outbreak to the World Health Organisation. There were reports of 'scepticism' amongst Western health 'experts' about the official Chinese figures for the disease. This scepticism was apparently vindicated when Chinese officials later admitted that the original estimates of numbers of cases of SARS were too low and admitted that they were wrong to claim that the original outbreak in Guangdong had been successfully dealt with. 'Traditional Chinese reticence' was widely criticised both by Western officials and in the subsequent newspaper reports. Chinese Communist Party officials were widely reported in the newspapers to have 'covered up the existence of killer pneumonia' (Sheriden, 2003).

In contrast to Chinese mendacity and corruption, Western 'health experts' were said to be critical of 'the secretiveness' of Chinese authorities, and that this secretiveness had 'delayed efforts to combat the disease'. Unidentified Chinese journalists were also widely reported as saying that the Chinese authorities thought that news of the outbreak would 'spoil the city's image' and that

rumours of the illness led to panic. One article ended with the following:

> The Chinese cover-up continues. Reporters in Hong Kong say victims in Guangzhou are still too frightened to talk. In Shanghai, where rumours of an outbreak spread last week, officials have banned Chinese journalists from reporting anything but official statements. The foreign press has been told to be 'responsible' because reporting the outbreak would be 'bad for the business environment'.
>
> (Sheriden, 30/03/03 *The Sunday Times)*

Officials and journalists in Hong Kong were also quoted as being critical of the stalling of (mainland) Chinese authorities. The complaints of Chinese Communist party officials that the reaction to SARS in Hong Kong was 'hysterical' were taken as further evidence that the Chinese were dangerously underplaying the seriousness of the epidemic.

From early in the reporting there were reports of SARS's own 'patient zero'. This term originates from Randy Shilts' history of AIDS, as described in Chapter 2, referring to a Canadian air steward said to be the sexual 'link' between many of the original HIV infections (Shilts, 1987). The term 'patient zero' seems to have entered the lexicon, as it was used in the newspapers in the context of SARS without any explanation of its origins. One particularly lurid newspaper report told of how

> As he shuffled through the lobby of the Hotel Metropole, the elderly professor was feeling feverish and faint. At the lift, he steadied himself for a moment in the open doorway before his body

> convulsed in a series of wracking coughs that sprayed fine droplets of saliva onto the walls and the people waiting inside.
>
> (Fraser, 23/03/03 *The Sunday Telegraph)*

By the middle of April, the *microbes are evolving* theme was combined with the *patient zero* theme to promote the speculative theory of so-called 'super-carriers' of infection. These asymptomatic people were thought to be responsible for an unexplained cluster of cases in a Hong Kong residential tower block. Other 'experts' were reported to believe the cause was the sewerage system, or rats, cockroaches, or other insects.

Starting from the initial reporting in the middle of March, there were descriptions of life in 'rural China, where people routinely live in unsanitary, cramped conditions in close proximity to poultry and other animals' (McDonald & Rogers, 23/03/03 *The Sunday Times).* From the end of March, the theme of the alleged poor hygiene standards of the Chinese mentioned in the previous weeks' reports became more explicit. There were many descriptions of the allegedly poor hygiene standards of the Chinese, and a new aspect started to be mentioned: spitting.

> This is a common habit in southern China, where most people cough and sneeze without covering their faces. Pools of saliva are frequent sights in restaurants, trains and buses.
>
> Epidemiologists say such practices, combined with overcrowding and pollution, plus a history of viral outbreaks jumping from pigs and poultry to humans, make Guangdong province one of the world's most dangerous breeding grounds for

infectious viruses

(Sheriden, 30/03/03 *The Sunday Times).*

Here we see the seeds of a number of themes that were to grow in importance over the next few weeks: spitting, pollution, dirt and living close to animals. All of these made China a 'dangerous breeding ground for infectious viruses'.

When the reporting described the effect of SARS on the Hong Kong economy, the city was depicted as deserted, its people frightened to go out in public for fear of infection. In contrast to the descriptions of deserted Hong Kong, the city of Guangzhou, the capital of Guangdong and the putative source of the epidemic, was described as carrying on business as normal. Chinese conditions were blamed squarely for the emergence of this virus, which was assumed to have jumped species because of poor Chinese hygiene, 'their' fondness for exotic foods and farming methods, in particular the practices of keeping poultry and swine together, and humans and animals living in close proximity. The following is a typical example (from *The Sunday Times*):

> Just six miles north of the city lies old China, which has yet to be sanitised by steel and concrete. The main market for live animals is like a scene from a virologist's nightmare: slaughtered carcasses of dogs, pigs and cows are steamed and skinned by teams of bare-handed workers.
>
> Blood, skin and offal are stamped into the mud, mingling with the droppings of ducks and chickens confined by the thousand in cages. As one trader boasts: "We Cantonese like our food so fresh we prefer to buy it alive."

> Experts believe the proximity of animals and humans in unsanitary conditions explains why viruses here often 'jump the species barrier', usually from poultry, which have weak immune systems, to pigs and thence to people.
>
> Add the Chinese peasant habits of frequent spitting, coughing and sneezing without covering the face, and all the ingredients for an epidemic are in place.
>
> (Sheriden & Rogers, 06/04/03 *The Sunday Times)*

Noteworthy is how 'old China' has yet to be 'sanitised', and the picture painted of the (virologist's) nightmarish vision of humans and animals and their 'droppings' in unsanitary proximity with 'bare-handed' workers, who spit and cough without covering their faces.

Another similarly lurid example (from another broadsheet, *The Independent on Sunday*) similarly describes a rural Chinese market where:

> ... [Y]ou can buy live scorpions by the jar here. Women using chopsticks deftly lift them one by one from red, round plastic tubs containing a seething mass of the creatures. There are puppies and kittens in tiny cages, tanks of fish, terrapins and tortoises of all sizes, five mice in a row, turning their wheels and a family of sleepy rabbits. Half-gallon jars of five-snake wine, the skins of the reptiles gleaming in the amber liquid, stand next to bottles of black ant wine and cock testis wine, revered for their health-giving properties...
>
> It is not the only dubious tradition. As I watched a man buying

> scorpions, the woman serving him hawked a gob of sputum from her throat, lurched to her feet and spat expertly behind my heel. Spitting is as natural as sneezing here – bubbles of phlegm pepper the streets – and could be spreading the virus. Of such simple habits are global epidemics made.
>
> (Laurance, 06/04/03 *The Independent on Sunday)*

Of note here are the 'clues' to the epidemic, particularly the exotic food and the connected bizarre superstitions of the Chinese, for whom the five snake, black-ant and cock testis wine are 'revered for their health-giving properties'. However, far from being medicinal, from the reporters / assumed readers' perspective, the backwardness, superstition and disgusting food of the Chinese are the source of the pathogenicity of SARS.

In sum, the Chinese were held to blame for SARS and the blame went in three directions. The Chinese Communist authorities were blamed for having covered up the scale of the epidemic and for not 'co-operating' with the 'global health authorities', namely the Western doctors, scientists and epidemiologists of the World Health Organisation. Secondly certain individuals, the *patient zeroes* and *super-spreaders,* were blamed for recklessly or unwittingly spreading the disease. Finally the Chinese in general were blamed for the genesis of and / or for spreading SARS due to their alleged fondness for exotic foods, for living close to animals, and for their allegedly poor hygiene, in particular their habit of spitting in public places. Even in the more liberal broadsheets, the themes of difference, of dirt and 'our' disgust at the way

'they' live and what 'they' eat begin to from into a coherent package. The (British) reader is led to place the responsibility for SARS at the door of the Chinese and at the same time is reassured that 'it couldn't happen here' because 'we' don't live like that.

5.3 Discussion

The first interesting feature of the SARS phenomenon is the speed at which the whole episode unfolds, from first reporting, to panic, to a rather embarrassed silence – all in three months. The clear contrast here would be the response to AIDS in the early 1980s when, as described in Chapter 3, the news media in both Britain and the US largely ignored the story for many months (years even), until it became clear that white heterosexual people, people like 'us', were at risk. The first outbreak of Ebola in 1976 also got little attention in the news media. Yet SARS evoked a world-wide response almost immediately. This is no doubt partly due to the recent experience of AIDS, which provides an example of the possibility of an obscure new disease becoming a pandemic that could kill tens of millions of people. The other possible reason for the difference between the amount of coverage Ebola garnered in comparison with SARS was the changes that had occurred since the 1990s in the global news media, in particular the appearance of global 24-hour television news channels. Technological advances such as the use of satellite technology to beam stories instantly from one side of the world to the other also facilitated the immediacy of the coverage of SARS in comparison to earlier epidemics of 'emerging infectious diseases'. The television coverage subsequently added to the self-

referential media news value of the SARS story.

Another interesting result that fits with earlier studies is the dynamic between posing the threat and almost immediately de-emphasising it. Ungar (1998) noted in his analysis that the threat of contagion is almost immediately followed by the reassurance of containment. This pattern is clearly replicated in the case of SARS reporting. The first descriptions talk of the new threat being a 'killer' or 'deadly', and early on speculation follows on how the epidemic will play itself out. The predictions were dire: this could be the 'next plague', the 'big one we've been waiting for' and so on. However, even in the early stages of the reporting, against the threat there is always a counter-promise that the problem will be contained by Western doctors / biomedicine. The melioration comes almost immediately when it is acknowledged that this probably is not 'the big one' but rather can be seen as a rehearsal for it. The threat, the risk, is postponed, but at the same time kept fresh in our minds.

Whereas Larson et al. (2005) and Wallis & Nerlich (2005) argued that the plague metaphor was not used in the British media coverage of SARS, their finding on this point is not consistent with the results of this research. However, the idea that the main conceptual metaphor used in SARS was 'killer', particularly a killer animal fitted with ideas of *hunting* or *tracking* (Larson et al., 2005) is mostly corroborated by the research reported here, although the killer metaphor was one of several used, and arguably not the central metaphor.

The White House announced that the second Gulf war had begun on the 20th March 2003. The SARS epidemic therefore occurred at roughly the same time as the US and British were invading Iraq. The media attention on the war in Iraq might have kept SARS out of the newspapers to a certain extent. Although there was some speculation at the outset that SARS may be connected to bio-terrorism, this was discounted early on. Mentions of the Iraq war in the newspapers in connection with SARS were usually simply to say that the war, in combination with SARS, was damaging the economy, in particular the commercial airlines.

The lack of a war metaphor in the SARS coverage is striking due to the coincidence of SARS with the Iraq war, and some writers have argued that the context of the war in Iraq may have pushed commentators to develop a distinctive discursive system for the two stories (Larson et al., 2005; Wallis & Nerlich, 2005). The World Health Organisation presented itself as *working with* and *collaborating with* national authorities, so at no point was a 'war on SARS' declared.

> SARS was, after all, a rival to the Iraq War news, rather than a subject to be elucidated through comparison. The political divisions that accompanied the Iraq War may also have contributed to making war an unattractive metaphor system for an epidemic in which international cooperation and diplomacy was so important.
>
> (Larson et al., 2005: 261)

However, war metaphors were used in the Chinese media by critics and supporters of the government, pro- and anti-Beijing media alike (Baehr, 2006),

arguably because the disease was perceived as a threat to the Chinese nation in a way that it was not perceived as a threat to Britain.

However, the general sense of gloom and pessimism emanating from the ongoing so-called 'war on terror' does perhaps pervade the reporting of SARS, albeit in a subtle way. For example, the millennialism and sense of impending apocalypse is greeted with something approaching warmth, as if 'we' deserve it for 'interfering with nature'. Earlier epidemics are invoked, together with their death tolls: the Black Death, Spanish flu and AIDS. For example, in the context of SARS the Spanish flu epidemic of 1918, which killed around 40 million people, was widely recalled; as opposed to, for example, the West Nile Virus outbreak in the New York in 1999 in which there were 62 cases and seven deaths, (with 4,156 US cases and 284 deaths since then) (Public Health Laboratory Service, 2003). Another perhaps more relevant example that was infrequently cited in the coverage of SARS is variant Creutzfeldt-Jakob Disease (vCJD), whose predicted death toll was in fact very much lower than the figures that some were predicting at the height of the 'mad cow disease' media scare in 1996. (There were 137 cases and 132 deaths from vCJD up to 2003 (UK CJD Surveillance Unit, 2003).

According to Social Representations Theory, one would expect the link between a new disease and previous ones to be made by *anchoring*, which integrates the understanding of a new phenomenon by configuring it in terms of past phenomena. SARS was framed from the outset as 'this could be the next plague' and thus *anchored* by serious previous epidemics with death tolls

in the millions, rather than diseases like vCJD, which had only claimed a relatively small number of cases. In Joffe & Haarhoff's (2002) and Ungar's (1998) work on Ebola, there was no similar use of earlier epidemics to *anchor* Ebola and illustrate the devastating *potential* of it. The use of the plague metaphor also *anchors* SARS conceptually not only with *the* plague, i.e. the epidemics of bubonic plague in early modern Europe, with also with more recent incarnations of the plague metaphor, in particular AIDS, the 'gay plague'. AIDS, like SARS, was itself initially configured in terms of earlier epidemics which had been linked to foreigners, out-groups and perverse practices.

Another feature of the coverage of the SARS epidemic that marks its difference from the coverage of Ebola was that there were very few graphic descriptions of the effects of the disease, as there had been with Ebola. In media coverage of some diseases, descriptions of people affected serve to give a human face to the disease. This 'works' so long as the person is felt to be sufficiently 'like' the assumed reader that there can be identification, for example the 'innocent victims' of AIDS. These descriptions give a human face to the disease. The graphic descriptions in the Ebola reporting served another purpose. Rather than humanise the disease, they functioned to evoke fear by depicting how terrifying and horrific the disease was (Joffe & Haarhoff, 2002). Yet in the case of SARS there are few similarly frightening descriptions. Neither are there many 'human interest' stories of named individuals who have been affected by the disease, with the exception of Dr Urbani. There is thus no attempt in the British newspapers at identifying with the mostly Chinese people who were ill and

dying from SARS.

One further feature of the reporting of SARS that was absent in coverage of Ebola was the effect on the economy. Ebola did not have any direct effect on the economy outside of the local area affected. Indeed, according to the World Health Organisation, SARS was the first 'severe infectious disease to emerge in the globalized society of the 21st century' (World Health Organisation, 2003c). This theme links to Beck's (1986) *Risk Society* thesis in that for Beck, one of the characteristics of risk in the post-industrial, globalised era is that they are unbounded by the geography of the nation state. Although epidemics of infectious diseases cannot of course be characterised as a feature of modernity in themselves, from Beck's perspective they may be characterised as *Risk Society* concerns because there is the potential to spread these diseases by air travel. The way that the risk was constructed on a global scale also links to the point above about the global news media, which is another of the features of the post-industrial globalised society.

One of the concerns of the newspaper reports was the ease with which SARS could be spread around the world by those people infected but with few or no symptoms, by boarding an international flight from an affected area and taking the pathogen with them to another country. This has been characterised in the newspapers as the *stepping off a plane scenario* and was also a feature of the Ebola reporting and of the reporting of other emerging infectious diseases. There have been well documented cases of a single plane journey transporting a disease from one country to another, and there were of course such cases with

SARS. However, according to Farmer (1999):

> ...transmission of this sort, though dramatic and well-documented, is rare. Far more common is the... hidden-away suffering of a family that will never board a plane to any destination. But [dreadfully enough]... proximity to the non-poor is the chief source of hope for those now without treatment.
>
> (Farmer, 1999: 127)

Farmer's point is that most people affected by emerging infectious diseases are unlikely to *step onto a plane* in the first place because these diseases primarily affect the poor. Yet the dread of the poor (or of 'foreigners') as a source of infection (of the rich) persists as an enduring theme in the history of infectious diseases. Although SARS' 'patient zero' was in fact a Chinese doctor rather than a poor Chinese peasant, the *stepping off a plane scenario* can still be conceptualised as the modern incarnation of this fear of contagion.

Another reason why an epidemic like SARS may fit the *Risk Society* model is that the risk posed by an epidemic like SARS is unlimited in terms of its consequences, in this case the consequences to the global economy. In the British reporting of SARS, once the initial 'mystery' 'killer' phase had passed, the risk from SARS for a British reader was characterised not as deriving from actual *infection* but from the threat the epidemic posed to the global economy, which was described as facing a crisis as a result of the SARS epidemic.

If we might say that from Beck's perspective an epidemic like SARS is a particularly post-industrial phenomenon, then Douglas, from her perspective

would point to the similarities between reactions to a 'modern' epidemic like SARS and to epidemics that struck 'primitive' societies. Douglas would argue that the same blaming / *othering* model can be seen in SARS as could be seen when any society is faced with the threat of a new infectious disease. In terms of who was blamed for SARS, there are several connected strands to the blaming in the newspaper reports. One is that the Chinese authorities are blamed because they are corrupt and secretive. The other is that the Chinese in general are blamed for the genesis and spread of SARS because, according to the reports, they have dirty habits such as spitting; they live close to animals; have bizarre customs and superstitions; and eat disgusting food. In parenthesis, it is worth noting that, perhaps strangely, Hong Kong, which has only recently ceased to be a British colony, is regarded as Western from the point of view of the newspapers. It is only the mainland Chinese authorities and people that are treated as other.

SARS seems to provide a clear case of the blaming / *othering* model. In the media coverage of Ebola, the depictions of locals (Africans) were as passive. In the media coverage of SARS the Chinese people are not depicted as passive but they are invisible: they are rarely quoted and their opinions are rarely sought. A good example of how the Chinese were rendered invisible is the coverage of Dr Urbani's death. the World Health Organisation press release stated that the Dr Urbani was the 'first WHO officer to identify the outbreak of this new disease' (World Health Organisation, 2003a). However, in the newspaper reports he was credited him with being 'the first person' to identify the disease. Here, the newspapers mean the first *Westerner* rather than the first

person. When the newspapers accused the Chinese of a cover-up, they were implicitly acknowledging that Chinese doctors must have identified that SARS was a new disease several weeks earlier, probably as early as the previous November.

The mainland Chinese officials were described as corrupt, secretive, incompetent, chaotic or mendacious. Furthermore, the Chinese were depicted as a source of infection, either as *patient zeros* who are culpable for carelessly spreading the disease or as 'breeding grounds for new viruses' because they live in filth, eat live animals for food, cough and spit without covering their mouths and so on. These descriptions are clearly meant to invoke 'our' disgust at the way 'they' live. According to Joffe (1999), this *othering* mechanism is primarily concerned with identity protection, which refers simultaneously to protecting of the in-group and to building its cohesion by negatively distinguishing the *other* from it. *Anchors* are devices that the in-group finds comfortable, familiar and acceptable. At the same time, the chosen representation maintains the status of certain groups in society.

The descriptions of the effect on daily life, particularly in Hong Kong, evoke either zombie or post-apocalypse horror-film imagery: the deserted shopping malls, cinemas and restaurants; empty public transport; events where crowds would gather cancelled; and the use of surgical face masks. A whole set of images and symbols are repeatedly used in the reporting that speak of Chinese irrationality, backwardness and chaos, and of the threat this poses to the rationality and superiority of the West. China, the Chinese and their culture

thus threaten 'global' (read Western) health and institutions. Containment is said to be provided by another set of images: heroic Western doctors, laboratories and surveillance, with all their associated connotations of rationality, modernity and order. The binary oppositions of Western / Chinese images presented in the media coverage of SARS connects to Shohat & Stam's (1994) point about *Eurocentrism. Our* rational science is contrasted to *their* superstition; *our* global commerce (banks / airlines / shopping malls / multinational corporations) threatened by *their* chaotic and dirty markets; *our* surveillance thwarted by *their* secrecy; *our* efficiency (laboratories / doctors / scientists) battling *their corruption.* Poor Chinese peasants and the pathogens that they breed thus threaten to invade and lay ruin to *our* modernity.

Conclusion

Despite some notable differences, there were many similarities between the media coverage of SARS and that of Ebola. In particular, the way the readers' fears were aroused and then almost simultaneously dampened through *othering*. The British reader was reassured that 'it couldn't happen here' because the Chinese are so different from 'us'. As Africa and Africans were portrayed as disaster ridden in the case of Ebola, so China and the Chinese are portrayed as an inevitable breeding ground for new infections in the SARS case. Whether it was African local customs in the case of Ebola or Chinese ones with SARS, all confirm the African / Chinese as *other* (and by implication inferior to 'us'). And with both Ebola and SARS the only hope of containment is provided by the promise of (Western) biomedicine.

Most epidemics throughout history have been global in the sense that they have not been contained within national boundaries, Spanish flu, smallpox, syphilis, cholera, even the Black Death travelled around the globe due to travel, by sea if not by air. The spread of SARS was facilitated in part by the modern availability of air travel and by migration attendant on economic globalisation affecting the Far East. Ultimately the SARS epidemic was contained through surveillance and scientific investigation of its cause co-ordinated on a global scale. However, beyond the *realist* global epidemic (the medical syndrome) SARS is situated the globalisation of the *phenomenon* of the SARS panic. The saturation and speed of the world news media's coverage lead to the (supposed) risk posed by SARS being *socially constructed* on a global scale. Despite the modernity of the medium, the message is familiar. The social representation of SARS resonates with representations of infectious diseases throughout history: where the blame for the new threat is laid on those outside our own community, the *other*.

Chapter 6 – The case of 'mad cow disease'

> Society has become a laboratory where there is absolutely nobody in charge. An experiment has been inflicted on us by the beef industries, and the most ordinary decision – to eat or not to eat beef – could be a life and death decision
>
> *The Politics of Risk Society* (Beck, 1998: 9-10).

From both the anthropological perspective of Douglas (1966, 1992) and Douglas & Wildavsky (1982) and from the social psychological perspective of Joffe (1999), we gain a blame / *othering* model, in which foreigners or already marginalised groups from within a society are blamed for new epidemics of diseases. The model works well to explain many different epidemics, both modern and historical. The previous chapter described how the media coverage of SARS could be explained using this model.

On the face of it, however, this type of model cannot map onto the social representations of 'mad cow disease', at least from a British perspective. Britain was the source of the epidemic, British farming methods caused the appearance of this novel disease in cows, and British farmers subsequently exported the disease to the rest of Europe. From a British perspective, there are no outsiders, no foreigners, no *others* to blame. However, from the perspective of another country, the blaming / *othering* model would still work to characterise the representations of 'mad cow disease'; see for example, Demko (1998) and Dornbusch (1998) in Chapter 3.

The present study goes further than earlier studies on media coverage of 'mad cow disease' such as those of Kitzinger & Reilly (1997) and Macintyre et al. (1998) in several important respects. It attempts to elucidate the coverage of the phenomenon framed within a social representational rubric; and it places the 'mad cow disease' story in the context of the research literature on the media coverage of other so-called 'emerging infectious diseases' such as AIDS, Ebola and SARS. It also examines the 'mad cow disease' phenomenon in terms of Beck's *Risk Society* thesis, as well in terms of the discussion of blaming and *othering,* in particular to elucidate what mechanisms come into play when *others* cannot be blamed for a new epidemic. It will ask how mad cow disease was described. Who or what was said to be at risk? Who was held to blame? Firstly, in order to provide some context to the newspaper reporting of 'mad cow disease', the story of the epidemic will be recounted.

6.1 The context of the study

In April 1985, a private vet was called to a farm in Kent to see a cow who had become aggressive and developed problems with co-ordination. Despite various attempts at treatment, the animal died. Seven more cows died on the same farm in the next 18 months. By 1986 three other English herds had been identified with similar cases (Rhodes, 1997). In 1987 the first published report of what was by then called Bovine Spongiform Encephalopathy (BSE) appeared in the British journal *Veterinary Record.* In the *British Medical Journal* of 3rd June 1988 there was an announcement, reported the following

day in *The Guardian,* that 'food sold in the UK may be contaminated with a brain disease caught from infected cattle' (Erlichman, 1988a).

In response, in 1988 the British government established The Southwood Committee to examine the problem. The Committee recommended that BSE infected animals be compulsorily slaughtered and their carcasses destroyed. It also recommended that ruminant-based protein be banned from being fed to other ruminants (Dealler, 1996). In November 1989 the British government introduced a ban to exclude from the human food chain certain cattle organs from cattle older than six months. By December of that year, cases of BSE were running at 900 a month (Dealler, 1996). In March 1990 the European Community restricted exports of cattle from Britain to those less than six months of age. Soon after, BSE was made a notifiable disease throughout the European Community.

An important contextualising story for 'mad cow disease' was the salmonella in eggs scare of 1988. In the summer of 1988 British ministers were made aware of a rise in food poisoning caused by a new kind of chicken salmonella. The bacterium was easily killed by heat, but raw eggs in dishes such as tiramisu could potentially cause *salmonellosis.* In late 1988 the Chief Medical Officer ordered hospitals to stop using raw eggs in favour of pasteurised products. Then at the beginning of December the then Parliamentary Under-Secretary for Health, Edwina Currie, said on television that 'most of the egg production in this country, sadly, is now infected with salmonella' (Pennington, 2003: 26). Egg consumption fell and she resigned. A food safety

inquiry followed, one of the outcomes of which was introduction of The Food Safety Act 1990. Co-incidentally Currie resigned on the same day that the Southwood Committee held its second meeting. The Ministry for Agriculture, Fisheries and Food (MAFF) were thus giving a much higher priority to the Currie row than to BSE at this time (Pennington, 2003).

In March 1990 a domestic cat was confirmed to have died in Bristol of a spongiform encephalopathy. Up to that point, the British government's line had been that BSE in cows was a derivative of the sheep disease scrapie, caused by feeding meat infected with scrapie to cows. As scrapie had existed in the British sheep flock for centuries and did not affect humans, beef was said to be safe to eat. Yet cats were also not susceptible to scrapie, hence the ability of BSE to jump species to cats was regarded as a cause for concern. Reassurances followed from the British government, which failed to satisfy other European states, who started to ban British beef. During 1992, evidence began to accumulate for the presence of spongiform encephalopathies in more and more animals, particularly zoo animals fed on meat and bone meal (Lacey, 1994).

Many people were not convinced by the government's reassurances, particularly the microbiologist Professor Richard Lacey and his colleague Dr Stephen Dealler, together with Dr Harash Narang and some others. Lacey had already made himself unpopular with the government in the earlier salmonella scare during which he had supported Edwina Currie; and in the later listeria scare, in which he had argued (correctly) that a newly introduced method of food preparation ('cook-chill') being used in institutions such as hospitals led

to the danger of *listeriosis*. These 'dissidents' argued that in the light of the mounting evidence what would later become known as 'the precautionary principle' should be applied to British beef. The British government's response was to accuse them of scare-mongering.

In 1993, *The Lancet* reported the death from Creutzfeldt-Jakob Disease (CJD) of a dairy farmer whose herd had been infected with BSE (Brahams, 1993). This was followed by reports of another similar case later that year. The British government claimed these had occurred by chance. By May of that year the Ministry of Agriculture, Fisheries and Food reported that 2,157 cases of BSE had been confirmed in cattle born since the feed ban. The Ministry argued that nearly all these animals had probably been exposed to ruminant protein in feed despite the ban, as feed was being used up illegally (Lacey, 1994). By September this figure had risen to 4,010 and by December to 6,246 (Lacey, 1994). Despite the reassurances, it was becoming clear that BSE was being transmitted from cow to calf.

In January 1994, Channel 4 Television screened a documentary *Dispatches* about Victoria Rimmer, who was by then dying of CJD at 15 years old (she died in 1996 aged 18). A further 11 possible cases in people under 50 years of age had been referred to the CJD Surveillance unit in Glasgow by the end of 1995. Eight turned out to have a new variant of Creutzfeldt-Jakob Disease (vCJD). Whereas sporadic CJD is normally quite variable in clinical symptoms and pathological damage, these new cases were strikingly similar to each other. The vCJD cases also showed damage to similar areas of the brain as to those

found in cows with BSE (Dealler, 1996). Finally, the weight of evidence of a link between eating BSE infected beef and contracting vCJD became too great and on the 20th March 1996, Stephen Dorrell, the then newly appointed British Minister of Health, announced to Parliament the 'probable' link between BSE and recent cases of vCJD in young people.

In sum, despite mounting evidence to the contrary, the British government denied that 'mad cow disease' posed a risk to human health for 10 years, until in 1996 they admitted a 'probable' link between the animal and human forms of the disease. Although during this 10-year period the issue was rarely out of the news, there was one particular moment in 1990 when the death of a cat from a related disease led to a media panic. Instead of sampling at regular intervals across this 10-year period, this research instead focuses on temporal 'snapshots' in the 'mad cow' story. It examines the early reporting, the period around the 1990 media panic, and the period immediately after the announcement of the link between BSE and vCJD.

6.2 Results

How was 'mad cow disease' described?

In the initial period sampled between December 1987 and June 1989, we see the first explanations of this new (animal) disease. One of the themes that recurred in the early reporting was that the disease was mysterious or unknown. Scientists were said to be 'baffled', 'confused' and 'concerned' at

this new disease. There were conjectures that the cause was probably a virus or a genetic modification of a virus. Connected to this theme were the explanations by journalists of what BSE was, in terms of other similar diseases. An important theme in this early reporting was therefore explanations of other Transmissible Spongiform Encephalopathies such as scrapie. The official line that scrapie in sheep was the source of BSE in cattle was the primary story. Thus the reporting focused on describing scrapie: how it manifested, how long it had been endemic in Britain, and how it caused no human health problems.

Alongside this reassuring message, however, several articles of the same period recounted the story of Kuru in Papua New Guinea and of (sporadic or hereditary rather than acquired) Creutzfeldt-Jakob Syndrome, the Spongiform Encephalopathies that were known to affect humans. There were a number of graphic descriptions of these illnesses and of the 'peculiar and terrifying' deaths of people who had died of (sporadic or hereditary) CJD, with descriptions of the accompanying paralysis, dementia, deafness and blindness. So even as early as June 1988, the spectre of a CJD type illness affecting humans from eating cattle infected with BSE was raised as a possibility. As one report of in *The Guardian of* 15th November 1988 put it: 'The possibility of a jump to humans is not absurd' (Tucker, 1988). By May 1989, the phrase 'mad cow disease' began to appear alongside 'BSE' in a report in *The Times*, although at this point the moniker was still in inverted commas (Cannon, 1989).

A frequently occurring theme in the first year's reportage of the BSE crisis was salmonella. Egg production contaminated with salmonella was linked in these stories to milk production contaminated with BSE, and milk from BSE infected cows was banned from the human food chain on the advice of the Southwood Committee. The newspaper reporting at this point was accepting of the Committee's line that BSE was caused by feeding cattle the remains of scrapie infected sheep. Reports pointed out that the salmonella outbreak in poultry had also been also caused by bolstering poultry feed with the remains of dead poultry. BSE and salmonella were also connected in terms of being problems besetting both the food producers and the government. By the following February a government warning had also been issued about the dangers of listeria in soft cheese.

In the second period sampled (in May 1990), the BSE story was still framed in terms of the earlier salmonella and listeria scares. There was a subtle shift though. In the earlier period sampled (when the salmonella in eggs row was at its peak) the general feeling was that the salmonella scare was unjustified and that Edwina Currie had been right to resign over her remarks. Yet by 1990, many commentators were saying that Currie was right to say that most egg production was infected with salmonella, that the policy of killing the whole flock when there was any salmonella was the right one, and that such an approach should be taken with BSE.

Whereas newspaper reports initially framed the new disease as a food poisoning or veterinary issue, this was no longer possible following the

announcement of the link between BSE and vCJD in 1996. There followed a fundamental sea change in perceptions of the problem. The disease that made cows 'mad' was now, unequivocally, also a fatal human disease. From this point there were accounts from relatives of people who had died of vCJD, as well as a role call of the victims' names, ages and occupations and some graphic descriptions of their illness. Other Transmissible Spongiform Encephalopathies were described and these descriptions served to illustrate the symptoms of vCJD in humans, for example loss of co-ordination and memory.

Once the threat to human health had been established, one thread of reporting attempted to quantify that risk. In one article in *The Guardian* of 22nd March, Professor Lacey, by this time rehabilitated from his 'dissident' status, was quoted as saying that 'The worst-case scenario is that about half the population is vulnerable to Creutzfeldt-Jakob disease according to their genes and it is distinctly possible that 5 to 50 per cent have eaten enough of the infected agent to produce the disease over the years' (Radford, 1996). Even the government's own advisors were quoted in the reports as predicting a large epidemic. For example:

> Fears that the death toll from the new strain of CJD could turn into an epidemic gained credibility when a leading member of SEAC [the Spongiform Encephalopathies Advisory Committee], the Government's own scientific advisory committee on the outbreak, warned that casualty figures might rise significantly.
>
> Mike Painter, a consultant in communicable disease control for Manchester, said that the number of deaths from the disease could

> eventually be between 10 and 100,000, though it was still too early to say whether there would be a 'big epidemic'. Professor John Pattison, the Government's chief adviser on BSE, said last night that an epidemic on the scale of Aids was possible.
>
> (Bowcott et al., 22/03/96 *The Guardian)*

In this passage there was a prediction of a 'big' epidemic, comparable to AIDS, a prediction given credibility by the fact that it came from the government's 'own' experts. Connected to this was clearly a theme that this could be the next plague. The 100,000 figure quoted above was frequently mentioned in the newspapers over the subsequent days and there was even one estimate in *The Guardian* of 25th March (Anon, 1996a) that there would be 10 million cases of vCJD by 2005.

So although initially 'mad cow disease' was described as a 'baffling' mystery, it was framed as a food poisoning issue on the same scale as the 1988 salmonella crisis or as a veterinary issue such as the sheep disease scrapie, which did not affect humans. However, from the outset, the possibility that BSE could cause disease in humans was raised, and descriptions of similar human diseases such as Kuru formed part of the reporting. Once the link between BSE and vCJD was confirmed, the new human disease was no longer framed in terms of food poisoning scares or animal diseases but was described in terms of the scale of the AIDS epidemic.

The risks posed by 'mad cow disease'

In the early reporting of BSE, an important theme related to reassurances that beef was safe to eat and that 'There is no evidence that there is any risk to human health', a phrase that originated with the Southwood Committee. The reassurances of the report of the Committee were given wide coverage in February 1989, but the newspaper coverage balanced these reassurances with the possibility, also mentioned in the Southwood Report, that transmission of BSE to humans could not be ruled out, even though it appeared a 'remote and theoretical' risk.

Despite these reassurances, by 1990 the dominant theme in the newspapers was of panic. One story recounted the decision by many education authorities and individual schools to take beef off the menu for school dinners and some old people's homes. The government regarded this as a panic measure and as unjustified hysteria. Indeed, government health advisors managed to talk the London Borough of Westminster's education officials into reversing such a ban. Most of the reporting followed the government's line, namely that such measures were unjustified hysteria. For example:

> Public bodies, such as those dealing with school or hospital meals, are irresponsible in reacting to the atmosphere of panic by sudden and capricious bans on all British beef products. The panic is based on ignorance, not all of which is excusable. There is a small risk in all food, including the most natural, but the circumstances in which the risk arises are not beyond analysis and rational assessment.

(Anon, 17/05/90a *The Times)*

In this passage we see how the government's line was supported by the journalist's juxtaposition of the irresponsible, 'sudden and capricious' panic and inexcusable ignorance against 'analysis and rational assessment'.

Numerous commentators in 1990 added their opinions to the debate. For example, there were reports in the newspapers that a spokesperson for the shop-workers' union (USDAW) advised the public to ignore the 'hysteria' surrounding British beef, while the union at the same time issued new guidelines to their members who worked in slaughterhouses and butchers to avoid cutting themselves and to cover any cuts to avoid infection. There were reports that the Meat and Livestock Commission wrote to all education authorities appealing to them not to take British beef off school menus because of the 'hysterical media hype'. The National Farmers Union reportedly accused the government of not doing enough to reassure the public that beef was safe to eat following a Gallup opinion poll that showed beef consumption was falling as a result of the media attention.

On 21st May 1990 there was a widely reported debate on the issue in the House of Commons, in which many Conservative members called on their government to provide greater public education to stop the 'ridiculous scare', while Labour's agriculture spokesman was accused of 'blatant scare-mongering'. The following report in *The Guardian* of Kenneth Clarke, the then Health Secretary's response is typical of the coverage of the debate:

> The Health Secretary yesterday attacked the 'idiotic decisions' to ban beef in schools, and poured scorn on 'crazy scare stories' which claimed that BSE could be dangerous to humans.
>
> 'This is the kind of story you would expect to run in the silly season,' said Kenneth Clarke, 'but this is not the silly season, and we are completely confident there is nothing wrong with beef, despite this crazy public scare.'
>
> 'Foremost experts assure us it is safe. I am confident it is safe. My attitude would change dramatically if I thought there was any scientific backing for this scare.'
>
> Mr Clarke, speaking in Manchester as beef sales dropped sharply around the country, attacked decisions by local authorities to ban beef from school canteens. 'It is a pity that the people responsible for education have so little regard for medical science. I think these are idiotic decisions.'
>
> He also ridiculed the highlighting of reports that similar diseases to BSE might have spread to animals such as cats.
>
> (Anon, 23/05/90b *The Guardian)*

By quoting Kenneth Clarke verbatim, the journalist does not challenge his use of the language of stupidity: 'idiotic', 'crazy', 'silly' used to describe those who would question the 'foremost experts' in 'medical science'.

Closely connected to this *panic*, there was also much reassurance that BSE posed no threat to human health. The measures to control the spread of BSE that had already been taken, which originated from the Southwood Committee,

were reiterated. The government was portrayed as having acted on the best scientific evidence and advice available. There was also reporting of a story about the major British supermarkets which had issued their own reassurances to the public. The Sainsbury's supermarket chain, for example, 'guaranteed absolutely' that none of its meat could have been affected, although it later had to withdraw the claim.

Another major theme in the main news and in the financial sections of the newspapers was the effect that BSE was having on the economy. The financial sections were full of reports of falling sales of beef in supermarkets; of farmers and meat wholesalers who complained that cattle prices had slumped; and of plummeting share prices of companies connected with beef (such as burger chains, steak restaurants, butchers, abattoirs and meat processors, even animal feed producers). A new theme that emerged at this point and which ran through much of the coverage is *British beef is the best in the world*, a quote from the Conservative Member of Parliament Sir Charles Irvine, reported in *The Times* of 17th May (Anon, 1990a). This phrase neatly sums up the sentiment of the time with its implicit tone of *hauteur,* rallying notions of British superiority and of xenophobia, particularly towards Europe. The reputation not only of British beef, but also of farmers and livestock producers was thus vigorously defended by many commentators.

In the days following the announcement of the BSE / vCJD link in 1996 there was an outcry in the newspapers, and a sense of outrage and disbelief pervades the reporting. There were predictions of a panic, and within a few days there

were reports of a crisis 'spiralling out of control'. 'Panic' was variously said to have erupted amongst consumers, the government, the so-called 'farming community' and the supermarket chains. The media were accused, particularly by the government, of 'whipping up hysteria'. As in 1990, there were stories of the imminent collapse of various branches of the food industry, bans on beef and so on.

Following this panic, there was a great deal of anger directed against the government, which had earlier reassured the British public that beef was safe to eat. In particular, the then Agriculture Minister John Gummer's 1990 stunt of feeding his four-year-old daughter Cordelia a beef burger in front of the press was frequently mentioned with some distaste. *The Times* of 21st March reported that the government got only seven minutes into its Common's statement before Harriet Harman, the Shadow Health Secretary, said 'There must be no more photocalls involving ministers feeding beefburgers to their children' (Thompson & Landale, 1996). Similarly, the old phrases that had been used to reassure since the original Southwood Committee's report were recounted, but now dubbed 'false reassurances'. There were also many verbatim quotes from Conservative ministers taken from the previous years, reassuring the public that beef is safe to eat. The following is a typical example from *The Guardian* and gives a collection of old headlines and snippets of news that captures the sense of betrayal of trust which was pervasive in the reporting of the time:

> 'It's delicious. I have no worries about eating beefburgers. There is no cause for concern.' John Gummer, Agriculture Minister,

speaking in May 1990 as he and his four-year-old daughter, Cordelia, sample beefburgers.

'There is currently no scientific evidence that BSE can be transmitted to humans or that eating beef causes CJD in humans. That issue is not in question.' John Major, speaking in December, 1995.

'The most likely explanation is that these cases are linked to exposure to BSE before the offal ban in 1989.' Stephen Dorrell, Health Secretary, speaking yesterday.

...The admission that... BSE may be transmitted to humans is a complete reversal of the position the Government has stood by for a decade.

(Brown et al., 21/03/96 *The Guardian)*

The tone of reporting on the day after the announcement of the link between BSE and vCJD tended to be one of shock and anger. But after a few days the sense of shock of the initial announcement was replaced by stories about the effect on the economy. The catastrophe predicted by the beef industry in the immediate aftermath of the announcement began to unfold as the days passed. The financial pages of the newspapers reported a 'stampede' to sell stock connected with beef. And there was much discussion of the effect of the announcement on the European beef export market. In fact within a few days imports of British beef had been banned from most European countries, as well as from the US and many other countries. The British beef industry was said to be 'staring ruin in the face' as prices plummeted and markets shrank. By

Monday 25th March the European Union announced a worldwide ban on the export of all British beef, a move that reportedly provoked 'outrage', 'fury' and 'disbelief' from farmers' leaders and in Westminster.

One story that got wide coverage was the announcement by the McDonald's fast food chain that it was to stop serving beef completely and planned to restock with imported beef before starting to sell beef burgers again the following week. By this point the beef industry, and the government were said to be 'in crisis'. The McDonald's story was taken as particularly symbolic of the state of the beef industry:

> In the most revolutionary McMarketing tactic since the opening of the first Moscow outlet, it plans to flush out every last fleck of stigmatised British beef from its kitchens.
>
> Burger-peddling begins again on Thursday, but the damage may already be done. The twilight of the Age of the Burger seems to be upon us.
>
> (Coren, 26/03/96 *The Times)*

In sum, initially the reporting of BSE was generally reassuring, stating that *there was no risk to human health.* But by 1990, there were reports of a panic, although generally the newspapers supported the government's line that the 'hysteria' around beef was unjustified. The focus of concern in government was the risk posed by BSE to the economy, rather than on any potential risk to human health. This focus was generally reflected in the media coverage. However, following the announcement of the link between BSE and vCJD in

1996 there was much angry revisiting of the reassurances previously given about the safety of beef. Initially the personal stories of those affected by the vCJD were an important theme of the reporting. However, within a few days the most important theme again related to risk that BSE posed not to human health, but to the British economy.

Who was to blame? – The politicisation of food

Throughout the reporting of 'mad cow disease' an important theme was that of corruption and concealment. In the early reporting there were stories of farmers concealing the illness, both because of the stigma of having the disease in their herds and because of the financial loss to them if their cattle had to be destroyed, given that at the time there was no compensation scheme in place. There was also much criticism in the newspapers of the nine-month period in which the Ministry of Agriculture ignored warnings that diseased cattle were still entering the human food chain. There were reports in February 1989 that a government commissioned report into the disease was being 'held back' while sections of it were deleted or amended.

By May 1989 there were reports of criticism of the government by 'senior pathologists and veterinary surgeons' who accused the government of not doing enough to stop diseased cattle entering the food chain and who had reportedly changed their eating habits as a result of the appearance of the possible health risk. Many of these 'experts' were quoted off the record, citing the Official Secrets Act as the reason they felt unable to speak out. By May

1990 there were reports that calves from diseased mothers were still entering the food chain. There were also complaints of excessive secrecy, for example how the government wanted to 'bury' the story of the death of the domestic cat from Feline Spongiform Encephalopathy with a low key report in the *Veterinary Record*, but had to call a press conference after the news was leaked to journalists.

In the days following the announcement of the link between BSE and vCJD in 1996 the theme of government corruption and concealment was given fresh impetus with stories of families of people affected by vCJD who were told by representatives of the government that their relatives' illness could not have been caused by eating beef. The government's record on the issue was said to be 'dismal', 'marked by contradiction' and 'misleading'. 'Fury' was said to be mounting at the government's handling of the disease. Indeed the crisis of confidence over the handling of the issue was reported as reflecting a wider crisis of confidence over the incumbent Conservative administration and its 'stupendous bungling':

> 'You have a situation where the government has lied over a period of five or six years to the public after introducing a policy in the early 80s that lead directly to these deaths'... [said the director of corporate communications at a large multi-national company]. 'Somehow, our expectation of our government has fallen to such low levels after the lies and scandals of the past four years that we aren't even particularly outraged. It seems normal to us that they would do that kind of thing then cover it up. We just want to deal

with the problem and live through it. If the government is planning to resell itself back to the country next year, it has a very big job to do to give the brand any credibility at all'.

(Armstrong, 25/03/96 *The Guardian)*

In the initial reporting, farmers were frequently given a sympathetic hearing as this food scare seemed to be the latest in a long line of blows to their industry. Alongside this sympathetic coverage for individual farmers, from the outset there was criticism of modern British farming and food production methods. The following extract is typical of the tone of these articles:

Just when they can least afford it, Britain's farmers are under renewed suspicion.

They already face the charge of growing fat on subsidies while polluting our crops, water and countryside with nitrate fertilisers and pesticides.

And they allegedly profit by pumping livestock full of growth-boosting drugs while confining them cruelly.

Now cattle rearers are suspected of covering up a fatal bovine brain disease which may trigger a similar condition in man, because no one will pay them enough to be truthful.

(Erlichman, 11/07/88b *The Guardian)*

There were frequent references throughout the reporting to farmers who 'habitually give antibiotics and other drugs' to animals; to the poor inspection regimes; to the fact that products like sausages needed only to contain 50% meat and might include what was euphemistically called 'mechanically

recovered meat'; and to the widespread use of pesticides and nitrates by farmers. There were some lurid accounts of the unsanitary conditions in modern factory farming. Farming practices were described as 'contaminated' and 'unnatural' and the feeding of meat to herbivores in particular was described as 'cannibalism'.

By 1996, there was a feeling that *we have somehow gone too far* in modern British farming methods. The relatively recently introduced practice of feeding 'sheep scraps' to cattle was described as 'feeding them things they weren't designed to eat', 'utterly deplorable' and 'nightmarish'. There were also some graphic descriptions of practice in abattoirs, in particular the removal of the brains and spinal cords, which may in the process have contaminated the meat on the carcass by spraying infected material on it.

The general tone was that modern farming and rendering methods were 'going against nature' and 'an offence against nature', and BSE was described in *The Guardian* of 25th March as 'nature hitting back', 'when it comes to man versus nature, nature will get you in the end' (Anon, 1996a). Professor Tim Lang, then Professor of Food Policy at Thames Valley University, warned in *The Guardian* of 22nd March: 'Never before have diseased ruminants (sheep) been fed to other ruminants (cows) and then fed to humans. We are in a mass experiment which is killing us' (Bowcott et al., 1996). One head chef was quoted as saying he '...believed there was an eerie inevitability about BSE: a kind of biblical retribution for taking a great British Sunday lunch and turning it into leather' (Anon, 23/04/96 *The Guardian*).

As a counterpoint to the focus on government concealment and corruption, there was another theme that appeared in the early coverage and which was given a small amount of coverage in the broadsheets, namely stories of *plucky doctors*. In the early days of the BSE epidemic, a junior doctor, Dr Tim Holt, 'blew the whistle' on the BSE story in an article in *The British Medical Journal* in June 1988. He argued there that the sale of infected cattle carcasses and all cattle brains should be halted. The *plucky doctor* fits into part of a wider narrative of tension between the government and the scientific establishment on the one hand and of *plucky doctors* and *bogus professors* on the other.

The government argued, at least until 1996, that the blame for the 'panic' lay with irresponsible reporting of the BSE story and in particular the reporting of the views of 'dissidents': the *bogus professors* who claimed there was a potential threat to human health. This (derogatory) label was given to Professor Richard Lacey and others and came from a debate in the House of Commons on 16th May 1990, in which Conservative Member of Parliament Mr Paul Marland accused Labour Members of 'flying in the face of science, preferring to be guided by a bogus professor and a dead cat'.

Professor Lacey was vilified in many quarters: for example three Conservative Members of Parliament (Robert Adley, Sir Charles Morrison and Ralph Howell) tabled a motion which attacked Professor Lacey, under the protection of parliamentary privilege, and that asked the Department of Health to investigate his mental state. Adley also organised a British beef tasting at the

House, while 'condemning the relentless attack on British farmers by professors who he [Adley] says display symptoms akin to BSE' (Anon, 17/05/90a *The Times*). Even Princess Anne got involved in the name calling: On the 22nd March she delivered the annual Stevens Lecture at the Royal Society of Medicine in London, and said:

> that while she accepted many people were 'genuinely concerned' about the disease, despite assurances from experts, she believed British beef was safer than some foreign meats that could be imported if people stopped eating British meat.
>
> Saying that 'neither I nor my children will stop eating hopefully British beef', she asked: 'Doesn't it make you wonder about the status of the experts when the considered response of government is not enough to allay the fears of some sections of the population? Is gut reaction getting the better of reasoned argument?'
>
> (Anon, 23/05/90b *The Guardian)*

When Professor Lacey was presented in a sympathetic light in the reporting, the story tended to be framed as *plucky doctor* story: a version of the 'plucky-doctor-stands-up-against-the-state' tale of heroism.

After the announcement of the link between BSE and vCJD in 1996, there was a reappraisal in the media of the role of the 'heretics', the *bogus professors* who had long been warning of the risks of BSE and who had now been vindicated. Not only Professor Lacey, but Dr Harash Narang, Dr Stephen Dealler and Sir Bernard Tomlinson were all mentioned in the newspaper

reporting, as were the various ways that their views had been ridiculed by the government and how their careers or reputations had suffered as a result. There were long accounts of how they were vilified as 'cranks' and how they were regarded as 'politically suspect'. These same dissidents' views were reappraised and now taken seriously by the newspapers. In fact, at this point the *bogus professors* become *plucky doctors.* For example:

> Professor Richard Lacey, a leading microbiologist who was among the first to raise the alarm over infected cattle, talked in biblical numbers: perhaps as many as 500,000 people a year becoming infected by the human form of the disease, CJD (Creutzfeldt-Jakob disease). [Notice how Lacey is dubbed a *leading microbiologist*]. Professor John Pattison, the chairman of the government's panel of independent specialists, conceded that Dr Lacey's predictions could not be ruled out. At its extreme, the threat could reach 'large epidemic numbers'.
>
> (Anon, 22/03/96b *The Guardian)*

Throughout the reporting of the 'mad cow disease' story the blame was directed at the government for concealing the threat of the disease and for mismanagement of the crisis. The other group who were blamed were farmers for their concealment of the disease in their herds and for the 'unnatural' practice of feeding sheep and cow scraps to cows. Against the government concealment was the theme of those few doctors and scientists brave enough to 'blow the whistle' on the potential danger. Initially, these people were

generally reported as 'hysterical cranks', although after 1996 their stance seemed vindicated.

6.3 Discussion

In retrospect, it seems remarkable how slow the BSE story was to get off the ground, and how few newspaper reports there were of the disease in cows throughout the late 1980s. When BSE was mentioned occasionally in the media, stories were usually confined to the science pages of the quality press (Gregory & Miller, 1998). In this early period when BSE was an entirely novel disease it is illuminating to examine the way it was represented in the rare articles that were published about it.

Social Representations Theory holds that one of the ways that the unfamiliar is made familiar is through the process of *anchoring*. In the case of new diseases, the link made between a new disease and previous ones is often made via an anchor that integrates the understanding of a new disease by configuring it in terms of past epidemics. Clearly though, the choice of anchor will influence how seriously the new disease is to be taken. In the previous chapter examining the SARS epidemic of 2003 for example, the (alarmist) anchor frequently used was the 1918 influenza pandemic, which killed an estimated 40 million people. This anchor cast SARS as a very serious threat. In the BSE example, there are several primary anchors used to describe the disease. In the early stages of the BSE coverage, the salmonella and listeria anchors function not to alarm, but to reassure. They frame BSE as a threat on a par with earlier food poisoning

outbreaks: namely, unpleasant, but not life-threatening for most people. The use of the scrapie anchor frames the new threat as an animal disease on a par with scrapie, which had been present in British sheep for many hundreds of years and yet did not pose a risk to human health.

The choice of other food scare stories to frame the BSE story in the initial reporting reflects a struggle in the British public policy discourse as to how BSE was to be defined: either as a veterinary or farming issue or as a potential human infectious disease (Miller, 1999). Had it been defined as a potential threat to human health from the outset, then the precautionary principle might have been applied, as it was, although arguably too late, in other new infectious disease such as AIDS. Yet BSE was dealt with not by the British Department of Health, but by the Ministry of Agriculture, Fisheries and Food, which also dealt with farming issues. Thus the way it was handled by the government helped build the social representation of BSE not as an infectious disease but rather as a veterinary or an environmental issue.

By May 1989, the moniker 'mad cow disease' begins to appear and bears some examination. In English 'mad' has two dominant meanings: *angry* and *crazy* (with the latter much more common in British than in American English,) or more rarely fondness, as in 'I'm mad about you' (Leach, 1998). As applied to animals it usually means rabid, as in 'mad dogs', and sometimes in idiomatic (British) English, 'craziness' in people is described using animal characteristics, as in 'He's barking mad' or 'She's as mad as a March hare'. In

literature, 'the mad' act outside conventions of normal behaviour and 'madness' has a rich connotative history.

Cows are not usually referred to as 'mad'; in fact if anything the animal is often associated with placidity, for example 'cowed into submission'. There is therefore a metaphorical tension in the label 'mad cow' between on the one hand the placid, passive image of the cow and on the other the disturbed, active connotations of madness. The label was originally coined as a humorous 'tabloid hook' to demonstrate the loss of cognitive capacity in the cows and at the same time suggest the 'madness' of 'mad dogs', as in rabies (Leach, 1998), although after the announcement in 1996 of the link between BSE and vCJD the idea of a 'mad cow' was to take on a much more sinister and horrific set of meanings.

An example of a similar phenomenon to that seen in the 'mad cow' case was the widespread rabies phobia in nineteenth-century France. In the period there were numerous fanciful cases of rabies infection from animals supposedly newly turned 'bestial'. In fact, actual cases of rabies were extremely rare, but the notion was that infection with rabies transformed people into maddened animals, unleashing sexual impropriety and blasphemous impulses. This fear of *de-humanisation*, of becoming in some way animal-like, was more frightening to the nineteenth-century French than rabies itself, despite the fact that the disease was invariably fatal until Pasteur's discovery of a treatment in 1885 (Sontag, 1989). This same fear of becoming like a maddened animal pervaded the coverage of 'mad cow disease', particularly in the period after the link

between BSE and vCJD was made. Set alongside descriptions of the physical and mental decline of the young people who succumbed to the disease (established through accompanying photographs and television news reports) were images of uncoordinated and frightened cows (Lindenbaum, 2001). The link between the mad animal and the *once human being* was made through a juxtaposition of these images.

As stated above, one of the government's responses to the BSE crisis from the outset was to frame the problem as a veterinary issue or a food scare rather than as a new infectious disease by using anchors such as salmonella. It is worth noting that at the same time that BSE was first reported, in 1986, AIDS was a huge media story in Britain and elsewhere. One of the interesting changes that happens after the announcement of the link between BSE and vCJD in 1996 is that the anchors used for BSE change from salmonella to AIDS (this could be 'the next plague', an 'epidemic on the scale of AIDS') with some reports in the sample predicting up to 10 million cases of vCJD.

The choice of AIDS as a new anchor in 1996 bears some examination. The use of the AIDS anchor is primarily a device to describe the potential epidemiological threat of the vCJD: namely it tells us that AIDS was at first an obscure disease that affected very few people but which later affected millions, as might be the case with vCJD. Although there is wide discussion of the role of anchors in the Social Representations Theory literature, the material force of the choice of anchor is less frequently discussed. The anchor chosen to describe a new phenomenon is far from a purely descriptive device. This

research gives a very real indication of the force of anchors in social representations, in that the use of salmonella and listeria to anchor BSE in the early coverage acts as a device to reassure and diminish the seriousness of the potential threat. By 1996, the anchor has changed to AIDS, the effect being precisely the opposite: to amplify the fear and sense of seriousness of the phenomenon.

Another issue that arises in terms of how these new diseases were described and understood, particularly after the link between BSE and vCJD was confirmed in 1996, relates to the notion of beef as a symbolic food, an emblem of Britishness. As such it was particularly devastating to a British audience for beef to become literally and conceptually contaminated. There is a large sociological and anthropological literature on food, which although varying widely in its theoretical slant, broadly shares the following conclusions: a focus on the non-nutritional aspects of food and eating in explaining patterns of consumption; a recognition that a broader unit of analysis than the individual is required (i.e. that individual choices are framed by cultural / social and material circumstances); and an understanding that the empirical evidence demonstrates that the qualities and attributes we link with particular foods are not related to the material or nutritional qualities of foods but are largely symbolic (Draper & Green, 2002). In this context, beef has traditionally been a significant staple of the British diet and symbolically identified with Britishness: for example: the 'Beefeaters' at the Tower of London; the British staple meals of steak and kidney pie, oxtail soup and roast beef; and the nickname given to the British by the French: *les rosbifs*. For the British, beef carries a great deal of symbolic

force and thus it was particularly alarming and shocking for the British public to learn of the health threat from it.

The panic that followed the appearance of a spongiform encephalopathy in a domestic cat in 1990 focused on two issues. Firstly there was the panic amongst consumers and the media owing to the potential for the disease to cross the species barrier and thus cause a human disease epidemic; secondly there was panic in the world of business and in the government about the potential (and later the actual) effect on the economy. The government attempted to reassure the public, or failing that, at least to divert attention by two means: by shifting the blame for the collapse of the beef industry onto Europe, and by discrediting the 'dissenters' who were warning about the potential risk to human health (and the media who were giving them a platform).

The intense media interest and government reassurances of May 1990 have been characterised as a *failed* attempt to change the definition of the problem from a veterinary or food scare problem to one of a potentially very serious crisis for human health (Miller, 1999). Following the initial intense interest the media were distracted from the central story, namely the potential threat to human health and the culpability of government. Instead they shifted their focus onto the threat to the economy. Britain's European neighbours, in particular France, were accused of using the BSE story as a convenient front to shield their protectionist policies. By appealing to British xenophobia and notions of superiority, the government and the press were able to shift the

agenda: *British beef is the best in the world* and anyone who disagreed with government line, for example the Brussels bureaucrats, must have had their own agenda, for example the protection and promotion of foreign markets.

This same refocusing on the economic impact rather than the human impact of the disease occurred following the announcement of the link between BSE and vCJD in 1996. In the first days following the announcement there were many human interest stories about people who had been affected by the new disease. And yet, as in 1990, the emphasis was soon shifted *away* from the threat to human health and within a few days was focused instead on the threat to the British economy, and in particular xenophobia towards other European states, as the British beef industry collapsed.

Another strategy used by the British government and its agencies to distract attention away from the growing panic in food consumers and producers was to criticise dissenting opinion (that beef may not be safe to eat) by discrediting the *bogus professors.* Indeed, one aspect of the newspaper coverage of the period around 1990 which seems extraordinary in retrospect is the vilification received by Professor Lacey and the other 'dissidents'. Lacey appealed directly to the media over the dangers of BSE, arguing that his attempts at following the usual scientific channels were being blocked by the government and scientific establishment (Lacey, 1994). However, when scientists contact the media before their work has been peer reviewed, they jeopardise their social and professional relationships within the scientific community (Gregory &

Miller, 1998). Consequently, together with his fellow 'heretics', Lacey was 'burned at the stake' (Pennington, 2003: 173).

Yet despite Lacey's vilification by Members of Parliament, he, and others, were often given a sympathetic hearing from some sections of the press. 'As public figures, "rogue scientists" are inviting to the media and their readership for cultural and metaphorical reasons. As a scientific figure, [he].... is the prototypical anti-hero, despised by the establishment, coming forward on behalf of innocent victims, himself the victim of a government conspiracy' (Leach, 1998: 123). Thus the *bogus professors* evolved into *plucky doctors* in the type of stories that are perennially attractive to journalists as they like to applaud 'romantic little-person-against-the-state stories as proof of the resilience of human nature' (Karpf, 1988: 60).

An important theme that runs through all three periods sampled is the effect on the economy. The crisis did indeed have a devastating impact on the demand for beef in Great Britain. The share of both pork and beef in the British meat market was relatively constant until the 1980s. Thereafter the beef share dropped markedly. The publicity that BSE received in the British media had a significant effect on the allocation of consumer expenditure among the meats, both in the short and the longer term (Burton & Young, 1996).

The focus of blame in the newspapers for 'mad cow disease' was clearly the Conservative government, and in particular the Ministers and their scientific advisors who for over 10 years reassured the British public that beef was safe

to eat. Therefore, in the first few days following the announcement of the BSE / vCJD link in 1996, one of the most important recurring themes in the reporting centres on revisiting the reassurances the British government had given over the previous 10 years. As late as 3rd December 1995, Stephen Dorrell had said in a television interview that there was 'no conceivable risk' from eating British Beef (Weir & Beetham, 1998). Quotes from Ministers and scientists are reprinted again and again under angry headlines. There is a palpable feeling of anger and shock in the reporting against the government.

By 1996, not only did 'mad cow disease' have the media interest that it had originally in 1990, but it also had the added news value of health interests: in 1996 there were real (rather than hypothetical) case studies of people dying of vCJD (Kitzinger & Reilly, 1997). After the 20th March 1996 announcement of the 'probable' link between BSE and vCJD, the British newspapers contained half as many articles on BSE in two months as they had done in previous 12 years (Gregory & Miller, 1998). As a result of the crisis, there was a 'feeling of abandonment' amongst the British people, 'an unprecedented breakdown of communication between British citizens and their public institutions in the aftermath of the announcement of 20 March' (Jasanoff, 1997: 223). For example, in an ICM Poll for the Rowntree Reform Trust carried out in September 1996, some three-quarters of British people stated that they did not trust the government, or advisory bodies, to tell them the truth about the safety of beef, food or nuclear installations (Weir & Beetham, 1998). Other empirical studies of consumers in Britain post-BSE found that there was 'widespread

cynicism and lack of faith' in policy makers as a source of advice (Draper & Green, 2002).

Another effect of the initial framing of BSE in terms of previous salmonella and listeria scares was that there was a connection made in the mind of the contemporary British reader to the perceived corruption and incompetence of the incumbent government. Particularly throughout the later part of their 18 year period in office, the Conservatives were beset by a series of sexual and financial corruption scandals (so-called *sleaze)* and the ongoing destructive battle between Euroskeptics and Europhiles which ultimately led to the ousting of Margaret Thatcher as Prime Minister and her replacement by John Major. The BSE crisis emerged at the end of a decade in which the British government had already been severely dented following food policy scandals about salmonella, listeria, microwave food safety, food irradiation and additives (Lang, 1998). The reassurances from the government and farmers' leaders around BSE have therefore to be seen in the context of the British people's existing scepticism of government policy on food as well as other matters.

As well as laying the blame for this new disease threat on 'our leaders' there was also a strand of blame attached to farmers and more generally to *the way we live now.* An important theme that came out of the reporting after the link was made between BSE and vCJD was a concern with the unnaturalness of the methods of the 'food production industry' (a euphemism for part of what used to be called 'farming'). There was often an Old Testament feel to the language used: 'going against nature', 'nature hitting back', 'biblical retribution' and so

on. BSE was seen as some sort of punishment reaped for many years of poor agricultural practice, or more radically as the wrath of nature for eating beef at all (Leach, 1998).

> The desperate images of diseased cows, disoriented, frightened and stumbling across farmyards, tapped into a general concern over modern industrial agriculture. Something was wrong. This was a moment at which people could no longer so easily forget where their food came from.
>
> (Hinchliffe, 2000: 138)

Many from a Green perspective have since used the BSE example as evidence against the project of the industrialisation of food production and genetically modified foods in particular, for example:

> The industrialization of farming is only an incident in a much grander project of subduing nature to human designs. Is it altogether fanciful to see the threat of a major outbreak of CJD as a symptom of nature's rebellion?
>
> (Gray, 1998: 45)

The tone of these concerns recalls Beck's (1986) *Risk Society* thesis. The 'mad cow disease' story fits his model well in the sense that BSE is seen as a product of 'unnatural' modern farming methods and the danger it poses to human health is unknown and unquantifiable. It is also an unbounded danger insofar as the prion proteins persist in the soil, and resist normal sterilisation techniques used for surgical instruments. The representations of 'mad cow disease' also connect with other *Risk Society* concerns about the role of science

and technology in food production, which was generally depicted as somehow having 'gone too far', in particular in the unnatural practice of making cannibals of cows. As Beck puts it:

> Farmers were viewed for centuries as the 'peasantry' wresting the 'fruits' from the soil, on which the life and survival of everyone depended, but this image is beginning to be transformed into its opposite. In this new view, agriculture becomes a distribution point for the toxins that threaten the lives of animals, plants and people.
>
> (Beck, 1986: 79)

Conclusion

It is impossible to say how much the 'mad cow' debacle contributed to the landslide victory for New Labour in the 1997 General Election. It was certainly one in a long list of scandals that overwhelmed the Conservative Party and led to the public's loss of faith in them as a credible and trustworthy government. On his first day as Prime Minister in May 1997 Tony Blair received the James Report, which recommended the creation of a Food Standards Agency, answerable to the Department of Health, which would separate regulation from sponsorship, and provide ministers with advice on consumer protection (Millstone & van Zwanenberg, 2002). One of the first actions of the incoming Labour government was to announce the creation of an inquiry to review the emergence of BSE and the adequacy of the previous government's response (Greer, 1999). In January 1998, the government published its White Paper *The Food Standards Agency: A Force for Change* (Ministry of Agriculture, 1998)

and The Food Standards Agency was subsequently established in April 2000 and took over responsibility for consumer protection and public health aspects of food policy (Millstone & van Zwanenberg, 2002).

The representations of 'mad cow disease' in the British press were something of an anomaly in the treatment of a new infectious disease. When a novel infectious disease appears in a community, the 'usual' response is to attempt to externalise the new threat, and consequently to blame someone or some group. This model explains the reactions to the appearances of new infectious diseases throughout history and more recently it explains reactions to the 'emerging infectious diseases' such as AIDS and Ebola. The previous chapter's examination of the reporting of the SARS epidemic confirms this model.

However, although vCJD is itself classified as one of these newly emerging infectious diseases, it cannot be represented to a British readership as a problem for *other* people. It was indisputably a British problem, caused by British farming methods, in particular by the deregulation of food production methods by the Conservative government of the 1980s. It was made worse by corrupt British farmers who covered up the scale of the epidemic and by government incompetence. In the AIDS, Ebola and SARS epidemics, there was a large amount of 'victim blaming' on the part of the media. However, there was no blame attached to the victims of vCJD themselves for their misfortune in the British media. Without the possibility of blaming *others,* the blame was laid squarely on the shoulders of both the British government and the farmers and modern farming practices, not only for the *genesis* of the new threat to

human health, but for making the situation worse by corruption and concealment of the problem, which facilitated the *spread* of the disease.

Chapter 7 – The 'hospital superbug' MRSA

> It may seem a strange principle to enunciate as the very first requirement in a Hospital that it should do the sick no harm.
> *Notes on Hospitals* (Nightingale, 1859: preface)

Strains of *staphylococcus aureus* that were resistant to penicillin were identified soon after the new drug came into clinical use in the 1940s. Methicillin was developed to combat this resistance, but strains of Methicillin resistant *staphylococcus aureus* (MRSA) appeared within a year of its release onto the market in 1960. So MRSA is not a new phenomenon, although in light of the 'emerging infectious disease' paradigm, MRSA has been reclassified as an EID. Therefore this research places MRSA in the context of media coverage of other similarly classified diseases.

MRSA, like 'mad cow disease', could not be represented as geographically distant from a British perspective, nor does it only affect only marginal populations. Thus the blaming / *othering* model seen in the media coverage of SARS, as well as in other EID is unlikely to fit the reporting of MRSA. It is likely to be represented in a manner more akin to the 'flesh eating bug' *necrotizing fasciitis* (see Gwyn, 1999) or to 'mad cow disease' *variant Creutzfeldt-Jakob Disease*. Thus, a key goal of this study is to discern which type of representation of EID can be identified in the newspaper coverage of MRSA. Like the previous chapters, this chapter will begin by providing some context to the MRSA story, before reporting its findings in relation to the

research questions posed: how was MRSA described in the newspapers; who or what was said to be at risk from it; and who or what was held to blame?

7.1 The context of the study

Staphylococcus aureus is often found on the skin of healthy people, where it usually causes no problems. However, it can be a common cause of anything from skin rashes to pneumonia, particularly when people are immuno-compromised due to other illnesses (Day, 2001). Before the advent of antibiotics, staphylococci were responsible for most hospital infections, primarily pneumonias (Fisher, 1994), and were initially susceptible to the new drug penicillin. However, very soon after penicillin came into clinical use in the 1940s, strains of *staphylococcus aureus* began to evolve which had the ability to produce an enzyme called beta-lactamase and to inactivate beta-lactam antibiotics like penicillin.

As early as the 1950s, resistant strains of *staphylococcus aureus* were responsible for three epidemics of life-threatening illnesses: wound infections in hospitals, infant pneumonia in nurseries and staphylococcal pneumonia affecting people weakened by influenza. This development and spread of penicillin resistant *staphylococcus aureus* led to a period of disenchantment about antibiotic use in hospitals. In October 1959 Beecham devised synthetic penicillins such as methicillin and cloxacillin specifically to combat beta-lactamase (Cannon, 1995). Methicillin was released onto the market in March

1960 and seemed to solve the problem of resistant staphylococcal infections as it was relatively non-toxic and very effective.

Warnings that methicillin should be used with care went generally unheeded, as potential resistance to the new drug was thought not to pose a problem. Methicillin was even sprayed into the air of infant nurseries (Ayliffe & English, 2003). Methicillin could not be taken orally and needed to be injected. Therefore methicillin was a step in the development of other related products which are still widely used and which can be taken orally, such as flucoxacillin. Methicillin has in fact since been withdrawn from clinical use. The first methicillin resistant strain of *staphylococcus aureus* was found by Patricia Jevons at Collindale in 1960, soon after methicillin was introduced clinically. The first death from *methicillin resistant staphylococcus aureus* (MRSA) followed in 1962 (Bud, 2006). Many more strains were isolated in different countries such as Denmark, Switzerland, Australia and India over the following years.

The pandemic of staphylococcal infections in hospitals in the 1960s and 1970s led to the recognition that trained staff were required to take responsibility for prevention and control of infection at a local level. Consequently, hospitals in Britain, the US, Canada and some other countries increasingly appointed infection control nurses. In 1970 the British Infection Control Nurses Association was founded, followed by similar organisations in the US and elsewhere. Infection control nurses were responsible for day-to-day infection control activities, mainly surveillance of infection, investigation of problems,

control of outbreaks, general hospital hygiene, decontamination of equipment and formulation of infection control policies. They provided advice on isolation of infected patients, liaison with occupational health and other hospital staff such as laboratory staff, and with staff education. Another development was the appointment of infection control link nurses in areas such as Intensive Care Units, where they had part-time responsibilities in infection control in that unit only and reported to the Infection Control Nurses (Ayliffe & English, 2003).

In the late 1960s and 1970s, MRSA started to disappear from Britain, Denmark, Australia and several other countries. The reason for this disappearance is uncertain, although it was thought that the discontinuation of the use of certain antibiotics such as tetracycline and streptomycin for acute infections might be a possible reason. Another reason was the effectiveness of the new infection control nurses (Ayliffe & English, 2003). This improvement did not last however, and in the 1980s a second wave of new strains of MRSA emerged in Australia, the USA, Eire and then Britain and other countries. The cause of this resurgence remains unknown.

MRSA is now present in most countries in the world (although Scandinavia remains relatively free of MRSA) and doctors and scientists appear unable to eradicate it (Wellcome Witnesses to Twentieth Century Medicine, 2000). MRSA has been recognised as a problem in Britain since an epidemic of the infection broke out in 32 hospitals in London and elsewhere in 1986 (Cannon, 1995). By 1990, MRSA had reached critical levels. The drug of last resort for

treating the infection is vancomycin, which is expensive and toxic. Since the 1990s there have been fears that MRSA is developing resistance to vancomycin and there have already been cases of MRSA which are at least partially resistant to it. In 1997 a strain of *staphylococcus aureus* that is resistant to all known antibiotics, including vancomycin, was reported in Japan (Day, 2001).

The emergence of MRSA, together with other related antibiotic resistant strains of bacteria such as *Vancomycin resistant enterococcus,* threatens to reverse the gains made by Western biomedicine, ushering in a return to a pre-antibiotic era in terms of the control of bacterial diseases. For many years there have been few new antibiotics discovered and the possibility of untreatable infections within the next 50 years has been suggested (Ayliffe & English, 2003). MRSA can result in serious illness, disability and death. While MRSA can strike anyone, it is most serious for those who are already immuno-compromised.

In parallel to the medical phenomenon of the development of the antibiotic 'wonder drugs' and their 'nemesis', antibiotic resistant bacteria like MRSA, there has been an increased focus on MRSA at a societal level. In Britain, MRSA has moved up the party political agenda and the British government has produced a number of reports in response to it: *Towards cleaner hospitals and lower rates of infection* (Department of Health, 2004); *The Matron's Charter: An Action Plan for Cleaner Hospitals* (Jones, 2004). These documents focus on cleaner hospitals as a means of reducing MRSA infections. However, although clean hospitals may be important as far as the morale of patients and staff are

concerned, it is generally agreed that the major route by which hospital infections are spread is on the hands of staff. Cleaning or disinfecting a floor has a short-lived effect in a busy unit as rapid recontamination occurs, often in about an hour. Although staphylococci can be found in the inanimate environment, they do not grow and gradually die. The main sources of transmission are people, in particular their hands (Ayliffe & English, 2003).

Discussions of MRSA in the media reflect this bias and tend to focus on the poor hygiene in hospitals and in other health care settings such as old people's homes. Such discussions tend to assume that this is at the root of the problem, and by improving hygiene MRSA can be controlled. In fact, even with clean hospitals *and* correct hand-washing by health care staff, studies show that only about a third to a half of all hospital-acquired infections are preventable, because it is not possible to eliminate several risk factors such as age (newborns and the elderly have limited immunity); severity of illness related to length of stay in hospital; and underlying diseases with immune deficiency (Lederberg et al., 1992).

In sum, the development of resistance by bacteria to antibiotics is an evolutionary strategy that is an inevitable consequence of antibiotic use, and will always be present in modern healthcare, particularly where seriously ill patients such as neonates or dialysis patients are treated. MRSA then has been a problem since the introduction of methicillin in the early 1960s. However, in the 1990s the problem became worse and attracted social and political attention. This chapter discusses how the issue was treated in four British

national Sunday newspapers in the 10-year period up to the 2005 British General Election. It asks: How was MRSA described? Who or what was said to be at risk? And who or what was held to blame?

7.2 Results

How was MRSA described?

In the early articles MRSA is described as an antibiotic or drug resistant condition, thereby providing a close copy of the medico-scientific description, with little embellishment. From 1997, MRSA was often described as 'killer superbug' in the tabloids and 'potentially fatal superbug' in the broadsheets. Accompanying the dangerous superbug label are a host of allusions to the serious implications of MRSA: a 'doomsday scenario', 'extremely dangerous', an 'impending health crisis' and a 'major threat to public health'. The emphasis on impending danger is tied in with the 'end of the golden age of antibiotics', which has been 'caused by overuse of the twentieth-century's magic bullet' in the following way:

> MRSA is a kind of time machine returning us to an age when patients routinely died from simple infections. We are still a long way off from the days before Alexander Fleming invented penicillin. But it is alarming just how easily we have squandered the legacy of Lister and Fleming. They gave us a crushing advantage in the fight against bugs which we have failed to safeguard.

> There are two reasons for the rapid rise of MRSA – the ability of germs to mutate and evade the iron grip of antibiotics and a disregard for hygiene in hospitals.
>
> (Bowditch, 11/03/01 *The Sunday Times*)

Thus in the first half of the 10-year period analysed, MRSA shifts from being described simply as a drug resistant condition to one packed with meanings linked to the squandering of medical advances, germ mutation and a disregard of hospital hygiene.

Amidst ongoing talk of the end of the antibiotic age as a doomsday scenario, by 2002 the microbes evolving theme had been elaborated once again. There were often descriptions of how MRSA was one of several 'super bugs' and how MRSA was beginning to become resistant to the antibiotic vancomycin, leading to 'the vastly more terrifying' *vancomycin resistant staphylococcus aureus* (VRSA). The evolution of MRSA was thus described in terms of the microbes increasing intelligence and evasiveness: 'the clever microbe is mutating to the point of being untouchable even by the most powerful antibiotics' (Dougdale et al., 24/08/03 *The Sunday Times*).

However, in juxtaposition to these negative messages of doomsday scenarios and talk of the end of the antibiotic age, there were numerous stories of medical miracles. There were a whole series of stories about unconventional potential medical breakthroughs in the search for new cures for MRSA or for new antibiotics. The headlines give a flavour of the stories: 'Killer frogs come to the aid of mankind' (Mckie, 27/04/96 *The Observer*); 'Tea peps up the

power of antibiotic' (Anon, 17/05/98 *The Sunday Times*); 'Electric nose helps sniff out infections' (Dobson, 15/08/99 *The Sunday Times*); 'Maggots make our flesh crawl, and heal' (Hill, 23/07/00 *The Observer*); 'Seaweed cure for hospital super bugs' (Adams, 07/01/02 *The Sunday Times*); 'The bug that kills bacteria' (Anon, 09/07/02 *The Sunday Times*); 'A dye to stop the dying: hand-cream prevents nurses passing killer superbug to patients' (Carter, 05/01/03 *Sunday Mirror*); 'Airfreshener could help beat superbug' (Nixson, 08/09/03 *Mail on Sunday*); 'Cashew nuts key to beating bug' (Anon, 28/11/04a *The Sunday Times*).

As well as the medical miracles as a counter-measure against the MRSA threat, another theme throughout the sample could be classified as personal measures. These were different ways in which readers were advised to avoid MRSA infection or to cure it (usually by 'boosting the immune system') if the infection was already present. Most tended to be complementary medicine alternatives to allopathic medical treatments. For example, many articles and responses to readers' letters advised honey, tea tree oil, 'Immune Formula' nutrients, 'MRSA Pure Mix, a blend of anti-MRSA essential oils', 'Cellagon Juice, an easily absorbed immune booster' and 'pro-biotic supplements'. The following is a short excerpt from a longer response given to a reader who had written in saying that she had MRSA in a surgical wound and was taking antibiotics for it, as well as having antibiotic dressings:

> New antibiotics are being developed to control MRSA but in a few years the clever bugs will change again to become resistant to these as well. Instead of mounting a drug assault on bacteria, we need to

> harness the body's innate healing power and ability to fight germs then, if necessary, use antibiotics sparingly.
>
> In your case, I advise taking special measures to support your immune system...
>
> ...Tea tree oil has been successfully used in trials with MRSA in Australian hospitals. A friend of mine's mother was hospitalised with a chronic infection and contracted MRSA. Luckily she was then shifted to a nursing home, given infusions of vitamins and minerals and a daily rub with tea tree oil. Within two weeks, the swab test for bacterial growth on her skin was negative. The combination of boosting her immune system and combating the infection topically with a natural medicine had beaten the bug.
>
> (Anon, 04/07/04b *The Mail on Sunday)*

In this passage there are a number of interacting themes: that microbes are evolving and are cleverer than us (or cleverer than biomedicine) but by 'boosting the immune system' with 'natural medicine' one can 'beat the bug'. Thus a confrontation is constructed between the 'bug' and individual and collective human immune systems, with military / war metaphors being strikingly pervasive: 'mounting a drug assault', 'fighting germs', 'combating infection'.

The following is another similar example, again saturated with war metaphors, written in response to a reader complaining of a fungal infection in their toenails:

> Finding that they [the bacteria] could no longer count on thriving on the bodies of people and domesticated animals, the smart bugs launched a counterattack.
>
> Some mutated and became resistant to penicillin. Scientists responded by developing synthetic antibiotics, changing their chemical structure to outwit the bacteria. But these in turn managed to become resistant to the new drugs, forcing pharmaceutical companies to develop ever more complex formulae. The battle continued until the arrival of the so-called superbug MRSA....
>
> ...Our bodies are becoming defenceless against these enemies, as a result of the overuse of antibiotics.
>
> (Ali 09/01/05 *The Mail on Sunday*)

The theme here is that Western biomedicine has 'gone too far' and that human beings are defenceless against these new 'enemies'. The clear implication is that antibiotics will not help: one has to help oneself by taking measures to 'boost the immune system'. The war metaphors here such as 'counterattacks', 'battles', 'defenceless against these enemies' hint at an intellectual fight between clever scientists and their even cleverer enemies: the 'bugs'.

Alongside this was another, less esoteric, strand of personal measures for avoiding MRSA, for example advising patients only to take antibiotics when 'absolutely necessary' and to ask health care staff to wash their hands; and recommending that visitors not to sit on a hospital patient's bed.

As well as a health issue, MRSA was also framed as a political one. In addition to the personal measures, the theme of political measures also started to gain in prominence from around 2004. The incumbent New Labour government was widely expected to, and in fact did, call an election in May 2005. From early summer and in particular from around the party political conference season in autumn 2004, MRSA started to become increasingly politicised. In this period a new theme emerged: political measures against MRSA. There were reports of an announcement of a £68 million hospital clean-up programme in May 2004. In June the government announced a new national strategy against MRSA, with:

> Millions of pounds [to be] spent on isolation rooms as part of Labour's hospital-building programme; a coming together of the biggest brains in medicine to develop new viruses designed to wipe out MRSA; matrons given new powers to deal with ward hygiene; MRSA managers appointed to monitor infection rates in every hospital; new league tables to 'name and shame' hospitals with high levels of bug-related illnesses; [and] an extra £3 million for research and development into the superbug crisis.
>
> (Gilfeather, 27/06/04 *The Sunday Mirror)*

In July 2004, the first league table of deaths caused by the infection in each hospital was published, and was widely covered by the media. However, in the six months immediately preceding the election, mentions of MRSA were generally in wider stories about the election campaign, as new measures to tackle MRSA were one of the Conservatives' election pledges. Although there

were many mentions of MRSA in the election coverage, they tended to be brief, with MRSA placed in the context of wider policy issues of health and National Health Service funding. The Conservatives made tackling MRSA a core policy in a populist manifesto and promised £52 million to fight it, assuring that they would 'give matrons power to control wards and destroy MRSA', with the authority to shut infected wards. Further evidence of the increasing politicisation of the issue was that the government announced a number of proposed measures against MRSA in the months before the election, including commissioning a large study into the problem.

The descriptions of MRSA in this 10-year period move from mapping closely onto the medical story to discourses of alarm concerning the advent of a 'superbug' that heralded the end of the *golden age of medicine.* Simultaneously, ideas stepped in to counter this doomsday scenario, proposing miracle cures and personal measures that could be taken in the face of the microbes that were trying to outwit biomedicine.

The risk posed by MRSA – 'It could be you'

One key feature of the reporting of MRSA was the 'human angle', with many articles describing the death or disabling of patients as a result of MRSA. Those cases highlighted tended to be unusual: either the famous or the young, with features often constructed around the mismatch between the seemingly trivial nature of the original condition and the serious MRSA infection that followed. For example, the death in 1996 of the elderly Lady Fitt after

contracting MRSA in the Chelsea and Westminster Hospital in London was reported in several newspapers. This death, from what was then a very new phenomenon, was then widely reported after Lady Fitt's husband gave a moving account of her illness in the House of Lords. As the years passed, there were increasing numbers of accounts of patients who had died of MRSA. For example, one story that garnered a lot of coverage in 2002 was that of the 'keen footballer' Troy Eames, who died of MRSA aged 23, a fortnight after having had an operation for an in-growing toenail.

After autumn 2004, the majority of tabloid stories about MRSA tended to focus on famous people who had contracted the bacteria. Of these, the one who generated most coverage was the British television actress Leslie Ash, who contracted MRSA during an admission to hospital with broken ribs following an alleged incident of domestic violence. The story had added tabloid spice as Ash later claimed the initial injury occurred during lovemaking. It was subsequently reported that Ash was in fact infected with Methicillin sensitive staphylococcus aureus (MSSA), which was said to be 'similar to MRSA but could be treated with antibiotics'(Templeton, 06/03/05b *The Sunday Times*).

Another famous person who featured widely in the coverage was Claire Rayner, the former agony aunt and President of the Patients' Association, who had become infected with MRSA following routine surgery on her knee. There were also many stories of ordinary people who had contracted MRSA, although these tended to concentrate on those who had contracted the infection in unusual circumstances, for example, 14-year-old Tom Jeavons, whose

parents claimed he had contracted MRSA whilst visiting his grandfather in hospital (the hospital denied he had been exposed to MRSA there); or people who had contracted MRSA due to trivial or cosmetic operations, for example following cosmetic breast surgery.

Connected to this human angle were the graphic descriptions of the effects of MRSA. Sometimes this was in the form of a fairly bland explanation that MRSA can cause skin and wound infections and septicaemia, though there were also more horrific stories of 'burn-like scars', 'abscess and sores, fevers and acute pain', or more graphically still:

> The bug can cause pneumonia, meningitis and heart and blood problems. It can exacerbate the flesh-eating condition necrotising fasciitis, a severe infection of the soft tissues below the skin which can also cause terrible deformities and is often fatal.
>
> (MacKaskill, 31/03/02 *The Sunday Times*)

In the run-up to the May 2005 general election the personal stories dominated the news coverage. Famous people who were reported to have contracted the infection or been affected by it now included Dave Prentis, the General Secretary of the health union Unison and John Reid, the Health Secretary, who disclosed that his mother died of a 'hospital acquired infection' in June 2004. There was also a great deal of coverage of the stories of infants who had contracted MRSA, including the death of baby Luke Day at 36 hours old from MRSA at Ipswich Hospital. Born healthy, he was thought to have contracted MRSA from a health care worker. His death, and those deaths of other babies

that were attributed to MRSA became a *cause celebré* during the election campaign, particularly after the Patients' Association reported that it was now 'commonplace' for babies to become infected with MRSA in hospital. In February 2005, The Patients' Association published a report showing high rates of MRSA in babies and in March announced a new campaign against MRSA, with

> '...more than 50 celebrities, including the actors Sir Derek Jacobi, Prunella Scales and Joanna Lumley, [to] join a new campaign by the Patients' Association to rid hospitals of the infection.
>
> The campaign is also supported by Leslie Ash, the actress who nearly died after contracting a variant of MRSA at the Chelsea and Westminster hospital in London."
>
> (Templeton, 13/03/2005a *The Sunday Times*)

In the six months prior to the May 2005 General Election, the killer / deadly theme gains a higher profile and increasingly the coverage includes statistics of the numbers of cases and deaths from MRSA. There is some confusion about these statistics. In some newspapers, it is reported that MRSA was 'contracted by 100,000 people last year in hospitals and is the cause of about 5,000 deaths a year' (Revill, 09/01/05 *The Observer*) although elsewhere it is reported that 'cases of hospital bugs like MRSA have doubled to 5,000 a year since Labour came to power in 1997' (Edwards, 16/01/05 *The Sunday Mirror*). It is unclear whether this 5,000 includes other Nosocomial infections, and it is also unclear whether 'cases' in this context means morbidity or mortality. This confusion persists throughout the reporting of the statistics: there is some confusion at to

whether the 5,000 figure applies to deaths from *all* hospital acquired infections, or from MRSA alone, as elsewhere it was reported that 'deaths from the superbug doubled since 1999 to 955 in 2003' (Gilfeather, 27/02/05 *The Sunday Mirror*). One campaigning group, 'Clean Hands Save Lives', however, claimed that the actual number of MRSA deaths could be 10,000 a year.

The risk posed by MRSA was thus illustrated by a series of personal stories of people who had contracted the infection. These people became iconic in their association with the disease and tended to be either the famous, the very young, or those people who contracted the infection in unusual circumstances, for example following trivial operations or after visiting relatives in hospital. In the last part of the period studied in particular, the human angle dominated and was used to indicate the deadliness of the disease and its tendency to strike vulnerable, innocent groups. The scale of the problem was also the subject of debate, with some campaigning groups claiming there was a higher incidence of MRSA than the government figures suggested.

Who was to blame? – The politicisation of dirt

In the early period of MRSA coverage, there were frequent references to health care professionals. In the descriptions of the doctors and nurses and their work there was often within the same article references both to poor nursing care and to the dedication of nurses. There were references to nurses smoking in store rooms and not washing their hands between patients, or not adequately cleaning cups that MRSA infected patients had used. Adjectives used to

describe hand-washing and general hygiene of health care staff were 'sloppy', with nurses 'struggling to cope' and 'jaded' 'weary' and 'unmotivated'. Doctors' and nurses' lack of training in hygiene related matters and the lack of hygiene inspections were berated. Interestingly, the nurses' spokespeople quoted blamed the doctors, while doctors' spokespeople blamed both doctors and nurses:

> 'Hand-washing is not sexy,' says Dee May, infection control adviser for the Royal College of Nursing. 'Medical staff are the worst offenders. They wouldn't dream of not scrubbing up before surgery but there is not the same recognition of the need in general health care.'
>
> Dr Charles Saunders, of the British Medical Association, said: 'Hand-washing is a large part of the problem. Doctors and nurses are grossly over-stretched and inevitably take short cuts to treat the number of patients who are being rushed through'.
>
> (Lewis, 27/01/02 *The Sunday Mirror*)

Yet often the same articles would describe the doctors and nurses as 'brilliant', 'dedicated', 'carrying out tasks with cheerfulness and humanity'. This mixture of both praise and criticism of basic standards of care and hygiene of doctors and nurses was a thread that ran throughout the MRSA reportage. Where poor care was criticised, there was often a caveat that nurses in particular were forced to cut corners, both because of understaffing and because of pressure from management. The following is a typical example:

> That the carpet in our consulting room should have been a bit grubby didn't seem a big deal: I am so amazed by, and grateful for, the superlative care my daughter receives that the question of how frequently somebody vacuums strikes me as being neither here nor there.
>
> Maybe cleaners would clean better if they were paid more, and maybe hospital staff would get more of a chance to wash their hands constantly if they weren't permanently busy trying to catch up with their ridiculous mountains of government-imposed paperwork.
>
> (Knight, 27/02/05 *The Observer*)

What is noteworthy here is that the blame for the poor hospital hygiene which led to the spread of MRSA was directed at the government or the hospital authorities.

Augmenting the blame targeted at the government for their policies was the theme of National Health Service cuts. The nurses' and the public servants' union (UNISON) spokespeople in particular were quoted as highlighting the decline in standards of hygiene. They claimed that this followed the privatisation of hospital cleaning services during the Thatcher era or that understaffing left less time to wash hands between patients. This theme became more prominent closer to the election in May 2005, when it was revealed that since privatisation of the National Health Service cleaning services in 1984, the number of cleaners employed had been reduced from 100,000 to 55,000 (Revill, 09/01/05 *The Observer*). This allowed the Labour government to rebut

the Conservative charge of Labour being responsible for MRSA, and allowed Labour to place the blame at the door of the previous Conservative government.

By 2002, the reports highlighted the shortage of infection control nurses in British hospitals. There were also some reports of corruption and concealment by hospital authorities and of cleaning companies flouting hygiene guidelines. When MRSA started to become more of a political issue in the run-up to the general election of May 2005, the allegations of corruption and concealment were directed not only at the cleaning contractors and hospital trusts, but at the government. The Health Secretary John Reid was accused of trying to gag 'Britain's leading expert on the killer bug', Dr Chris Malyszewicz. Another story that gained some coverage was that of hospitals discharging elderly patients into care homes without disclosing that they were infected with MRSA.

Another related theme in the reporting was that of the unsanitary conditions of hospitals. Several newspapers sent reporters undercover into London hospitals as ward cleaners. Their reports highlighted poor hygiene and hygiene training and supervision. There were reports of rat and cockroach infestations; flea-infested laundries; sewerage spilling into operating theatres; blood and urine stains on floors and beds; blocked sinks, poor or non-existent cleaning between patients and under beds; in toilets and so on. This theme persisted throughout the sample, with newspaper reports of a Channel 4 television documentary in

January 2005 highlighting dirty hospitals by using 'undercover' nurses with hidden cameras. One of these nurses was quoted as saying:

> 'I found pretty much all of the patients I attended to were either sitting in urine or sitting in faeces.'
>
> In another scene, a patient's mattress is shown caked through with blood. A toilet used by patients is shown to be flooded, raising fears that it is becoming a breeding ground for diseases. One of the reporters reveals that clean sheets for an entire ward are missing and that pillow cases have had to be used as makeshift towels.
>
> (Doward, 30/12/05 *The Observer*)

The letters pages of the newspapers also featured several letters from readers who had suffered from MRSA, or who had relatives who had suffered from it. They generally complained about the poor care and hygiene in hospitals. The following piece (from a journalist) gives a précis:

> For years I have been writing about this, prompted by my own observations and by many hundreds of angry letters from readers all over the country. They describe urine and faeces left on lavatory floors, and uncleared blood and vomit splattered here and there. They write of dust, hair, litter, used syringes, trays of half-eaten food and general filth on ward floors, of dirty or unchanged sheets and unsterilised equipment.
>
> They complain of nurses who wear their uniforms outside the hospital, who have hair trailing from caps across their patients and who don't wash their hands between treatments. There are doctors

> who take the same hand from sick patient to pen, to computer and then, unwashed, to the next patient.
>
> (Marrin, 07/12/03 *The Sunday Times)*

This summary of readers' concerns demonstrates the mirroring of lay and media concerns with the concerns around MRSA. These lurid descriptions of the state of National Health Service hospitals in both readers' letters and in journalists accounts are clearly meant to invoke disgust and alarm and contrast sharply with notions of hospitals as places of order and antiseptic cleanliness. The descriptions of dirty toilets and bodily functions, and their association with particular odours, also provides a shocking contrast with the antiseptic smell that might ordinarily be associated with hospital wards. All of this jars because of the expectation that hospitals should be such ordered and clean places.

The conditions in British hospitals were sometimes unfavourably compared with those in the developing world, particularly India. After one lurid description of an unsanitary British hospital, a retired doctor (and National Health Service patient) wrote 'If we saw sights like that in the Third World, our stomachs would heave. But somehow, we've become accustomed to it in the NHS' (Sanai, 26/01/03 *The Sunday Times).* Another journalist wrote: 'The sad fact is that Britain's hospitals are filthier than most Third World hospitals, but at least in the Third World there's an excuse – no money. In this country there is no excuse. There is only laziness and indifference' (Malone, 10/10/04 *Sunday Mirror).* Although biomedical sources frequently argue that antibiotics are freely available in many developing world countries without prescription and such misuse is a major contributing factor to global antibiotic resistance, it

is striking that in only one article in the sample does the role of the misuse of antibiotics in the developing world feature as a cause of drug resistance.

Alongside the negative images of dirty hospitals, a positive figure was also described. Throughout the reporting of MRSA there was much nostalgia for the hospital matron.

> In the old days, the ward sister – the Hattie Jaques battleaxe in uniform – reigned supreme. Actually, the stereotype was not far wrong.
>
> Matrons did do ward inspections and run their fingers along the bed frames to test for dust. If they found that standards had slipped they made sure things were put right.
>
> (Hawker, 07/01/01 *The Sunday Mirror)*

The 'bring back matron' theme was rarely used without language that alluded to her power. For example: 'In the old days, matron would cause hearts to quake when she scrutinised the area under beds and ran her finger along ledges inspecting for dust' (Sanai 26/01/03 *The Sunday Times).* Following the June 2004 announcement of a new national strategy against MRSA, the theme of 'bring back matron' became more prominent, again with this nostalgic stereotypical picture. For example Claire Rayner wrote: 'All nurses would think it was their responsibility to make sure the loos and the sluice rooms were pristine. Matrons used to rule with a rod of iron to keep standards up' (Templeton, 04/07/02 *The Sunday Times*). This blunter example is from the tabloids: 'When our hospitals had matrons they were spotless because matrons had the ultimate power and, of course, the responsibility. They were able to

bollock doctors just as they were able to give idle cleaners a boot up the backside. Now if anyone dares to tell a cleaner he / she is sloppy, there'd be a mass walkout' (Malone, 10/10/04 *Sunday Mirror*).

In sum, blame of doctors and nurses for the spread of MRSA was tempered by references to deeper structural problems that had created the hygiene crisis. Thus blame was placed with the government of the day and the previous Conservative government for National Health Service cuts. The saviour of this situation was seen to be the hospital matron. It was imagined that such a figure would resolve the hygiene problems, and therefore the spread of MRSA.

7.3 Discussion

In the early reporting of MRSA, this new phenomenon had to be described to the public, who were unfamiliar with it. *Anchoring* plays a role in contributing either to the amplification of concern around a new disease or attenuating concern, depending on the disease or epidemic that is used to anchor the novel threat. However, what is striking about the earlier coverage of MRSA in comparison to the other epidemics studied in this thesis is the lack of anchoring.

In Chapter 2 a further process involved in the evolution of social representations of a novel phenomenon was described, namely *objectification.* Objectification saturates an unfamiliar entity with more familiar images, symbols and metaphors which are easier to grasp. The process of

objectification overlaps with that of symbolisation (Joffe, 1999). A fundamental function of a symbol is to provide people with a means to experience abstract content. Symbols provide a sense of understanding at just a brief glance, complex messages are encapsulated in a simple and vivid manner. Symbols also contain an emotional charge, helping to create and maintain certain sentiments. In the case of MRSA the unfamiliar is made familiar via key symbols, first and foremost 'superbug'.

The term 'superbug', like 'mad cow disease', is a tabloid hook, and in terms of Social Representations Theory acts as an objectification or a symbol, transferring a set of metaphorical meanings onto the new phenomenon and thus making this abstract and invisible concept concrete. Although the genesis of the term 'superbug' is unclear, it was used in the tabloids and broadsheet newspapers as early as 1985, albeit usually in the context of stories about pesticides and the agricultural use of antibiotics. A popular science book published in 1995 called *Superbug – Nature's Revenge – Why Antibiotics Can Breed Disease* (Cannon, 1995). This book was quite widely publicised at the time of its release. Only later, from about 1997, does the term gain wide currency and start to become synonymous with MRSA. And like 'mad cow disease', which relates to *bovine spongiform encephalopathy,* or its acronym BSE, 'hospital superbug' is now widely used outside of the tabloid discourse: in broadsheets and even in political statements.

This begs the question of why 'super'? The origin of the word 'super' is from the Latin *supra*, meaning above or beyond. In idiomatic English, when

combined with another word, 'super' means: to a great or extreme degree; extra large or of a higher kind (as in superstructure or superabundant). Thus 'superbug' combines 'super' with 'bug' in the familiar colloquial sense as in 'supermodel', 'superpower' or 'superhero'. The reference seems to imply singularity (of a supermodel), strength (of a superpower) and / or indestructibility (as in superhero). There are ordinary 'bugs' (a quite innocuous term used to describe for example 'good bacteria' which colonise our gut and keep us healthy) and then there are *superbugs*. MRSA is thus understood as a phenomenon that is unlike others we might have encountered: ubiquitous, invisible, threatening and unconquerable.

The threat and invincibility of the superbug is augmented within the newspaper texts by military metaphors wherein modern biomedicine tries to do battle with this new enemy, or individuals attempt to buttress their immune systems to defend against it. The newspaper coverage frames the emergence of MRSA within the history of antibiotics and their role in medicine's successes in relation to infectious diseases. MRSA is later seen as 'nature's revenge' or the 'bugs outwitting us'. In some aspects the MRSA coverage fits well with Ungar's (1998) description of the coverage of emerging infectious diseases, in particular his *mutation-contagion* package, with its frightening core of themes. However, within his theory this package is offset with a promise of *containment* of the threat by way of 'medical progress'. No such discourse is present in the MRSA reports. No promise is offered of a medical solution to MRSA. Rather, the hope of containment arises from alternative therapies and strengthening the immune system via non-allopathic measures. This begs the

question of whether the 'superbug' severely jeopardises faith in conventional medicine such that society turns elsewhere to bring it under control.

This corroborates Beck's (1986) *Risk Society* thesis, with its focus on how in late industrial society risk and uncertainty arise from the realisation that the certainties of the utopian project of modernity and globalisation have not been and are not being fulfilled. MRSA could thus be cast as a threat that exemplifies the *Risk Society* thesis in being caused by misuse of modern technology, in this case antibiotics. Furthermore, as seen, antibiotics were regarded as one of the most tangible benefits of modern biomedical progress prior to the appearance of MRSA. The recasting of antibiotics from the 'magic bullet' or 'wonder-drug' as the cause of something as harmful and frightening as MRSA goes some way to accounting for the anxiety provoked by it. Something once hailed universally as a 'medical miracle' is now cast as at best impotent, and at worst the cause of a new and seemingly insurmountable problem.

In the coverage of 'far flung' diseases such as Ebola, and to a lesser extent SARS, there were graphic descriptions of the effects of the disease, but these tended to be impersonal descriptions of liquefying bodies, lungs filling with fluid and so on (Joffe & Haarhoff, 2002). In the MRSA coverage, there are many personal accounts of people who have suffered as a result of the infection. Indeed some of the 'celebrity victims' become religious in their crusades against MRSA (Strong, 1990); others become themselves iconic, for example baby Luke Day. So whereas the Ebola and SARS reporting was

characterised by graphic descriptions of the illness, these were impersonal and faceless, while with MRSA, there is a human interest factor constructed around an 'it could be you or me' set of assumptions. As Kitzinger & Reilly (1997) point out, the human interest factor, and the 'it could be you, it could be me' factor, are not intrinsic qualities of any particular risk. They are social and political constructs 'related to journalists' perceptions of their audiences and their own identities' (Kitzinger & Reilly, 1997: 334). In other words, the journalist must assume that the plight of the human face given to the disease will reflect and resonate with the audience and thus generate empathy.

In the discussions of the risk of MRSA there is a noteworthy elision of two related but distinct concepts: one is the concept of *antibiotic resistance*, namely the ability of bacteria to become resistant to antibiotics, and the other is of the individual *body's resistance to infection*. In the discussions of folk remedies for or folk prophylaxis against MRSA a range of means to 'boost the immune system' in order to ward off this antibiotic resistant bug are described. This confusion seems to underpin much of the contemporary discourse about infectious disease, antibiotic use and even vaccination, with a dichotomy created between the desire to maintain hygiene to avoid infection (germs), and a feeling that one should ensure that one's (or one's children's) immune system is 'tested'. From this perspective, antibiotics are seen as harmful in that they will somehow interfere with natural healing processes or in the maintenance of health. There is indeed a body of medical opinion that supports the idea of the benefits of testing the immune system by exposing it to pathogens – see Rook & Stanford (1998) and Weiss (2002) – although clearly this medico-scientific

message is transformed by elision with another message about the potential harmfulness of medical treatments such as antibiotic use (and vaccinations) in general.

Based upon this study's data one could argue that while the symbol 'superbug' expresses the power of MRSA, a further symbol, that of 'matron' expresses nostalgia for a time when antibiotics and clean hospitals were effective in containing disease. In contrast to the medical explanation of MRSA, there was little if any focus on the genesis of MRSA in terms of the over-prescription of antibiotics by doctors in the newspapers. In fact less than five articles out of a sample of 227 referred to it. The focus of the blame was not on what caused MRSA to evolve but on reasons for its spread, with poor hospital hygiene said to play the key role.

Some of the attributions of blame for the spread of MRSA are very individual, for example specific stories of doctors, nurses or cleaners and their laziness, indifference or unhygienic practices. However, far more pervasive are ambivalent attitudes displayed toward doctors and nurses, with links made between their shortcomings and structural problems that are beyond their control. When nurses in particular are described as unprofessional it is because the National Health Service is over-stretched. Similarly, blame does not tend to be attributed to hospital cleaners themselves for the poor hygiene of the wards. Rather, responsibility is laid at the door of politicians or at the system of competitive tendering in the National Health Service that has caused such poor standards. In British newspaper coverage of the 'flesh eating bug' scare of

1994, the blame for the outbreak was similarly deflected onto spending cuts at the Public Health Laboratory Service (Gwyn, 1999).

The politicisation of MRSA in the lead-up to the May 2005 issue allowed politicians of all parties to argue that their party would be the safest stewards of the National Health Service and that only they could be trusted to adequately fund or manage the health service. This may account for the ascriptions in which the individual doctors, nurses and cleaners often did not bear the brunt of the blame, even when their poor practice put patients at risk. Rather the organisational and managerial systems that had left the health service under-funded and under-motivated were held to account. In parenthesis, the Conservative election call to 'bring back matron' to 'clean hospitals and defeat the superbug' was anticipated by the Labour government which had the previous year already brought back the title 'Matron' – in their *Matron's Charter – An Action Plan for Cleaner Hospitals* of October 2004 (Jones, 2004) – with precisely the powers the Conservatives were calling for.

The call to 'bring back matron' underscores a certain nostalgia for a health service and for hospitals that were ordered, clean and safe, and the symbolisation of 'matron' in this context bears further examination. The term and role of matron has fallen out of use in the National Health Service for at least the past 20 years, although it is still often used in private care homes in Britain. The role of a nurse in charge of a hospital is more usually referred to in today's National Health Service as 'Senior Nurse', 'Nurse Manager', and perhaps less often these days as 'Nursing Officer' (possibly due to the latter

term's military connotations). 'Matron' is an explicitly gendered term, carrying with it connotations of matriarch, matronly and so on. As well as the old-fashioned and gendered stereotype associated with the word 'matron', for a British reader, the term would carry with it a whole series of connotations related to the *Carry On* comedy films of the 1960s. These stereotypical connotations are by no means implicit in the newspaper coverage – on the contrary, they are explicitly evoked. The question is why should a 'matron' be felt to be a safer bet to sort out the MRSA crisis than the more neutral and commonly used 'infection control nurse', who deals with hospital acquired infections in modern National Health Service hospitals? Perhaps the answer is that unlike the *hi-tech* bureaucratic-sounding 'infection control nurse', the regimented female authority figure of the 'matron' evokes a safe and trustworthy pair of hands for the National Health Service, with its associations of old-fashioned hygiene, order and morality.

These notions connect with the concept that dirt is 'matter out of place' (Douglas, 1966). If we examine the descriptions of dirt in the reporting of MRSA, we see an ostensibly 'modern' discussion of the danger of dirt (resulting from the pathogenicity of bacteria) obscuring a more fundamental and 'primitive' fear of the danger of an invisible contaminant lurking in the chaos of under-funded and poorly managed National Health Service hospitals. The rules that the matron would be called on to enforce are not there only to prevent disease, but they also function to separate and maintain spatial, personal and symbolic boundaries: washing hands or utensils *between* patients;

wearing nurses' uniforms *outside* of work; urine and faeces left *around* lavatories.

The lurid description of toilets and bodily functions and their association with particular odours also contrasts with the antiseptic smell which might ordinarily be associated with hospital wards. As Largey & Watson (1972) point out, odours, whether real or alleged, are often used as a basis for conferring a moral identity upon an individual or a group. From the anthropological record there are fascinating examples of the association of odours with 'purity' in the moral order, for example the practices of nose-kissing among the Eskimos, Samoans and others are a means of group identification and cohesion. At the same time, advertisers promote the idea that bad breath, perspiration and 'feminine odour' are signs of a contaminating character, a woman who rudely affronts others.

From a sociological standpoint, the 'skunk' we avoid may be an individual, a group, or as in this case a setting, i.e. the physical environment of a dirty hospital ward. The different odours of settings such as the smell of hospital disinfectant, serve to express their primary function. As Largey & Watson (1972) point out, a dental surgery smelling of cigarette smoke and beer would cause suspicion and anxiety amongst patients, undermining expectations of trust in the professional's integrity. Thus odours function partly to maintain boundaries of the appropriateness of the relationships engendered within social settings. Thus the descriptions of the filthy state and disgusting smells of National Health Service hospitals are clearly meant to invoke repulsion, and

the contrast is with the 'spotless', 'pristine' controlled ideal of cleanliness which the matron would enforce.

Apart from the role of poor hygiene in the blame for MRSA, there is also a strand of blame which is laid at 'our' door for squandering the medical breakthrough of antibiotics. There is a note of reproach and even regret concerning the way that 'we' have wasted antibiotics, although as stated, this strand of blame is not connected in any concrete way to the over-prescription of antibiotics. There is no sense that (new) antibiotics might be the answer to MRSA. The loss of faith in the technology is evidenced by the numerous unconventional remedies and prophylactics that are said to protect against MRSA, or the homespun methods of 'boosting the immune system'.

A further finding from this case study is that responses to MRSA do not fit with the *Risk and 'the other'* thesis of Joffe (1999) that would apply to AIDS, Ebola and SARS, and to many of the epidemics that appear in the historical and anthropological records. This pattern was that by blaming the *other* for the new disease, and negatively associating certain characteristics of the affected group with notions of risk, the threat was rendered distant for members of the in-group and this minimised anxiety. The MRSA pattern is that the blame for the novel threat is not externalised in the same way as in the blaming / *othering* pattern of EID like AIDS, Ebola and SARS. Media coverage of the 'flesh eating bug' and 'mad cow disease', however, do fit well with the MRSA pattern, as the coverage of both diseases was constructed around an 'it could be

you or me' set of assumptions by way of the human interest stories that dominated the coverage (Gwyn, 1999).

Conclusion

This chapter has demonstrated the power of symbols in the social representation of an EID such as MRSA. Together with the previous chapter on 'mad cow disease' this research points to the existence of not just one, but at least two patterns in the representations of EID. Furthermore, it has demonstrated how some risks become politicised. For Douglas (1992) dangers are always politicised. They are used to cast blame – be it on the victims of the danger for bringing it upon themselves (the pattern identified in relation to many EID) or on authorities for negligence (the pattern identified for MRSA and 'mad cow disease'). In both cases danger is used to create villains and victims from those who can be associated with it. The following, final, chapter will compare the representations of the three diseases in light of the research questions posed by this thesis.

Chapter 8 – The Meanings of Emerging Infectious Diseases

> Nothing could be more meaningless than a virus. It has no point, no purpose, no plan; it is part of no scheme, carries no inherent significance. And yet nothing is harder for us to confront than the complete absence of meaning. By its very definition, meaningless cannot be articulated within our social language, which is a system *of* meaning: impossible to include, as an absence, it is also impossible to exclude – for meaningless isn't just the opposite of meaning, it is the end of meaning and threatens the fragile structures by which we make sense of the world.
>
> *Every Virus Tells a Story* (Williamson, 1989: 69)

This thesis has explored the phenomenon of 'emerging infectious diseases' (EID) through a detailed examination of British media coverage of three of these diseases: the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003; the 'mad cow disease' story, spanning the period from 1986 to 1996; and the so-called 'hospital superbug' story of *methicillin resistant staphylococcus aureus* (MRSA) over the 10-year period to 2005. It has examined the newspaper reporting of these three diseases and posed the following questions: Firstly, how were they described and explained to the readers? Secondly, who or what was said to be at risk of these diseases? Finally, who or what was said to be to blame for these new phenomena?

Using Social Representations Theory, this thesis has tracked the transformation in reports of these diseases in the British newspapers from the world of the scientific journals and governmental (and non-governmental) organisations' press releases to the realm of 'common sense' knowledge. The thesis has

located these empirical studies within contemporary theories of risk and blame, namely the work of Beck and Douglas, and has elucidated them in light of existing Social Representations Theory studies of EID, particularly those concerned with media representations. The conclusions of the empirical work and the comparisons of how these epidemics were treated by the newspapers form the first part of this chapter.

The meta-narrative of this thesis focuses on the creation of this new category, 'emerging infectious diseases' by a group of clinicians, scientists and public health officials in the US in the late 1980s and early 1990s. The thesis has argued that up to the 1970s there was increasing optimism about the future of infectious diseases. By the early years of the 21st century, that optimism had been replaced by a feeling that infectious diseases were no longer a thing of the past, but of the future. This thesis has examined why and how that change took place. In particular it has cast light on what insights this change provides into the wider concerns of post-industrial societies.

This meta-story relates to how this new classification of already existing but mostly unconnected phenomena into one aggregated category served a number of purposes: for example it made the issue of 'far-flung' diseases, or diseases that affected out-groups or the indigenous poor, newsworthy, as the threat they seemed to pose to the 'average' person was magnified. The classification of the new category and subsequently the creation of the medico-scientific discipline of 'emerging infectious diseases' also served to re-focus Western governments on their public health infrastructure and infectious disease surveillance funding.

These were aspects that had been neglected due to the alleged conquest of infectious disease. The discourse around 'emerging infectious diseases' thus serves a number of broad political functions. This broader story will form the concluding part of this chapter.

8.1 Comparing the representations

Describing emerging infectious diseases

The first research question of the thesis was: How were these new diseases described? Comparing the three epidemics, there was a difference in the way that 'new' infectious disease epidemics were treated before and after the widespread acceptance of the EID paradigm. Of the three epidemics studied here, those that came to prominence before the EID paradigm gained wide currency, were generally given little attention, or their seriousness was downplayed. On the other hand, the aggregation of individual diseases into and onto the body of 'emerging infectious disease' category from the mid 1990s onwards caused the emergence or re-emergence of a novel infection to be given much more import.

The early coverage of 'mad cow disease' around 1986 centred on the 'baffling' mystery the disease presented. In retrospect, it seems remarkable that the new disease was not in any way linked to AIDS, about which, at the same time, media panic was at its height. However, Chapter 6 of this thesis demonstrated that it was only after the invention of the 'emerging infectious diseases'

category in the early 1990s that a conceptual link was provided for such disparate phenomena as 'mad cow disease' and AIDS. So when it first appeared, 'mad cow disease' was framed as a food poisoning issue on the same scale as the 1988 *salmonella* crisis or as veterinary issue such as the sheep disease scrapie, which did not affect humans. Having said that, the possibility that BSE could cause disease in humans was raised from the outset and descriptions of similar human diseases such as Kuru formed part of the reporting. By the time the link between BSE and vCJD was confirmed in 1996, the EID paradigm was established in the medical and media worlds. The sudden acknowledgement in 1996 that 'mad cow disease' could affect *people* was one reason for the conceptual link to other human diseases. However, another possible reason for the new human disease to be no longer framed in terms of food poisoning stories or animal diseases was the development in the same period of the EID category. Thus in 1996 the potential of an emerging vCJD epidemic was described in terms of the scale of another 'emerging' epidemic, AIDS.

Similarly, there was also a reframing of the issue of antibiotic resistance in light of the EID paradigm over the 10-year period studied here. Chapter 7 of this thesis demonstrated that while the early descriptions of MRSA in the middle of the 1990s mapped closely onto the medical story, by the middle of the following decade the discourse was transformed into one of alarm. The advent of the term 'superbug' connects to the EID paradigm, with its concerns about a breakdown in public health and misuse of medical technology heralding the end of *the golden age of medicine*. Also striking is that in the face

of antibiotic resistant bacteria, there was no appeal to biomedicine to provide new antibiotics or cures for this doomsday scenario. Rather there were notions of miracle cures and personal measures that could be taken in the face of the threat.

Reflectively, one of the ideas that prompted the conception of this thesis was the feeling that in the light of increased attention given to new infectious diseases post AIDS, there had been a loss of faith in biomedicine and an increased interest in alternative therapies. Much of the alternative medicine lobby seems on the face of it to be anti-medicine and anti-science. In the event, any link between emerging infectious diseases and the increased interest in alternative medicine in the same period was difficult to establish empirically. Thus this particular intellectual thread of the early part of the empirical work for this thesis led nowhere. It was therefore the cause of some surprise that the issue of alternative medicine resurfaced towards the end of the empirical work for this thesis. In the context of the MRSA reporting, there did seem to be some evidence that faith in biomedicine to provide a solution for the MRSA problem was lacking. In its place, means of 'boosting the immune system' using complementary and alternative medicine were suggested.

Unlike both the 'mad cow disease' and the MRSA stories, which both span the period before and after the widespread dissemination of the EID paradigm, the SARS epidemic in 2003 was firmly rooted in the conceptual landscape of being an emerging disease from the outset. Chapter 5 of this thesis demonstrated that although SARS was initially described in the newspapers as a 'mystery' (as

was 'mad cow disease'), by the time of the SARS epidemic, this mystery was framed as a 'killer' on a par with the Black Death and other similarly devastating historical epidemics. Again the EID paradigm is at the root of how the new threat was conceptualised, because it connected this new disease with several other diseases, which were unconnected in any medical or taxonomic way, save of course that they were infectious.

The research reported in this thesis has shown how the aggregation of these diseases by the time of SARS meant that the accumulated effect led to more apocalyptic projections than arguably would have been the case if SARS was just seen as a single epidemic, rather than one in a series of similar threats. When it became clear that SARS would not cause an epidemic similar in scale to AIDS or to pandemic 'Spanish' flu, then it was recast as 'a rehearsal for the big one'. So the threat of EID was always kept fresh in the reader's mind, even if the danger was postponed for the time being. There was also a certain amount of linking to the future, insofar as SARS was described as a 'rehearsal' for the next influenza pandemic. Since the SARS epidemic in 2003, discussions of the predicted influenza pandemic inevitably refer back to SARS.

One important difference in the reporting of the SARS story in comparison with MRSA was that with SARS there *was* faith that biomedicine would be able to provide a 'medical miracle' which would deal with the threat. So the SARS story was framed within an older narrative: with descriptions of Western doctors and scientists, as heroic 'disease detectives', who promise to 'track down' the 'killer' and deal with the threat. Yet another narrative frame for

SARS was a science fiction one. For Sontag, the metaphors used to describe AIDS took as their referents *Star Wars*, both the science fiction film and the Reagan era defence policy. Similarly, there was a great deal of science fiction imagery used in relation to SARS. However, in contrast to the high tech control and command and information technology metaphors used in AIDS, the vision of the future evoked in the SARS reporting was more akin to the genres of a post-apocalypse or a 'zombie' horror film, replete with images of people in face masks and deserted shopping malls and other public places. What is noteworthy is that SARS is located as a futuristic disease, which belies the way that infectious diseases have moved from a 'thing of the past' to one of the future. This discovery of different and shifting narrative frames for new epidemics is an interesting and original finding, and could potentially be the subject of further research.

In sum, all three of the diseases studied for this thesis were classified as 'Emerging Infectious Diseases' by the US Center for Disease Control, albeit retrospectively in the case of MRSA. In the periods studied here, all of these diseases were novel phenomena that needed to be explained and conceptualised for the newspaper reader. The early reporting of both 'mad cow disease' and MRSA occurred before the conception of these diseases as 'emergent'. These accounts for the most part mirrored a fairly bland and non-alarmist account of the scientific descriptions and government press releases. Yet after the embedding of the EID paradigm in the mid-1990s the various threats of the individual diseases were conceptually connected and aggregated. Therefore the later descriptions of the diseases were more apocalyptic and there was an

increasing pitch to the risk discourse. By the time of the SARS epidemic, the EID paradigm was already well established and from the outset the EID paradigm moulded the way the new epidemic was framed.

The risk of emerging infectious diseases

The second research question of this thesis was: Who or what was held to be at risk from these diseases? In comparing the three epidemics studied here, what is striking is the way that the risk was often initially framed as a health risk, but the focus then quickly shifted to the threat posed to economic interests. For example, the initial reporting of BSE generally followed the government's reassuring line that there was no risk to human health. By 1990, there were reports of a panic, though even at that stage the newspapers generally supported the government's line that the 'hysteria' around beef was unjustified. The focus of concern in the press reflected that of the government, which was that the risk posed by 'mad cow disease' was an economic one, rather than one to human health. However, following the announcement of the link between BSE and vCJD in 1996 the press coverage contained much angry revisiting of the reassurances previously given about the safety of beef. For a few days following the 1996 announcement, the newspapers carried many personal stories of those affected by the vCJD and this was an important theme of the reporting. However, once again the risk that BSE posed to the British economy soon replaced the risk to human health as the most important theme.

The personal stories of the risk posed by MRSA were one of the most important themes of the reporting of that story. The risk of the disease was incarnated by a series of stories of people who had contracted the infection. These people become iconic in their association with the disease (for example Leslie Ash, who later produced her own brand of 'anti MRSA hand gel', called Matron). Other sufferers who garnered much media coverage tended to be babies or those who had contracted the infection in unusual circumstances, for example following minor or cosmetic operations, or by allegedly visiting relatives in hospital. In the lead-up to the 2005 British General Election in particular, the human angle dominated and was used to indicate the deadliness of the disease and its tendency to strike vulnerable, innocent groups. The personal stories of the 'victims' of MRSA in the newspapers served to humanise the effects of the infection and bring the threat closer to the newspaper reader. Those chosen to illustrate the disease were people who the newspaper journalists thought would spark an identification with the imagined newspaper reader, the 'it could be you or me' factor.

By contrast, there were few if any personal stories of people affected by SARS, with the possible exception of Dr Carlo Urbani, the World Health Organisation doctor who died of the disease. When individuals were described, they tended to be named not as sufferers but as sources of infection, and therefore of blame. The initial reports posited that SARS could be the next plague, a threat on the scale of the Black Death. Not all the coverage was similarly apocalyptic however, and there were some commentators who expressed cynicism about the effects that SARS would have. In contrast to the reporting of MRSA, where

there was evidence of a lack of faith in biomedicine to sort out the problem, with SARS the threat was mollified, or at least postponed, by the promises of Western biomedicine to contain it. After the initial phase of the reporting, the later reporting tended to focus not on the concerns about the potential risk to people (or at least the British reader) of being *infected* by SARS but by the risk to the British reader of being *affected* by SARS as a result of damage to the global economy.

In sum, an examination of the newspaper coverage of SARS demonstrates that a blaming model is at play in SARS, where the risk posed by the disease was distanced by associating it with the *other.* This accords with Joffe's (1999) account of the coverage of AIDS and Ebola. However, with the cases of both 'mad cow disease' and MRSA another pattern emerges, where the risk of the diseases is made more immediate to the reader by personal stories of 'people like us' who had been affected by the disease. With SARS, there was little or no attempt at identification with the Chinese people who were affected by it.

Interestingly, the risk that SARS posed was tempered in the reporting by accounts of heroic (Western) doctors and scientists who promised to deal with the threat. In the case of MRSA, the figure of matron serves a similar function, although the matron symbolises not a high-tech scientific or biomedical response to MRSA, but a return to old-fashioned (female) order, cleanliness and good governance. With 'mad cow disease' the risk posed to the reader is *Beckian* in that it is unknown and unquantifiable. The possible consequences of the disease were initially made real through the stories of the people affected

by the disease. However, the focus of the reporting was almost immediately changed, as if the possibility of 'us' getting 'mad cow disease' was too terrible to contemplate and could not be dwelt upon for too long. After the initial period of shock and anger, the focus of the risk again moved to the economy.

The blame for emerging infectious diseases

The blame for these new epidemics went in a number of different directions. In the newspaper reporting of both AIDS and Ebola the blame for the diseases was placed at the door of those affected by it through the blaming / *othering* model. *Others* were said to be at risk because they were dirty, ate disgusting food, lived in filth, lived close to animals, or had bizarre customs, unhygienic habits, promiscuous or perverted sex and so on. Of course, this served not only to distance the threat but also to blame the victims for the risk they posed to 'us'.

A similar blaming / *othering* model was evident with the reporting of the SARS epidemic. The Chinese were squarely held to blame for SARS and this blaming went in three directions. The Chinese Communist authorities were blamed for having covered up the scale of the epidemic and for not 'co-operating' with the 'global health authorities', in other words the Western doctors, scientists and epidemiologists of the World Health Organisation. Secondly certain individuals, the *patient zeroes* and *super-spreaders* were blamed for recklessly or unwittingly spreading the disease, in language drawn directly from the AIDS epidemic. Finally the Chinese in general were blamed

for the genesis of and / or for spreading SARS due to their alleged fondness for exotic foods, for living close to animals, and for their allegedly poor hygiene, in particular their habit of spitting in public places. Strikingly, this *othering* discourse was not only a tabloid one: even in the more liberal broadsheets, the themes of difference, of dirt and 'our' disgust at the way 'they' live and what 'they' eat formed a coherent package. The (British) reader is led to place the responsibility for SARS at the door of the Chinese and at the same time is reassured that 'it couldn't happen here' because 'we' don't live like that.

In both the case of SARS and later in the early discourse about the origins of 'bird flu', China, the Chinese, and their culture and habits were presented as breeding, harbouring and spreading deadly new infectious diseases that threatened the West. Thus the discourse around 'emerging infectious disease' provides a focus for concerns about China's growing global importance. China's economic power presents opportunities for profit for Western markets keen to access them. Yet that power also poses a threat to Western economies in terms of competition. One aspect of the media representations of SARS was that it served to articulate these fears, but the very real threat of economic competition from China was transformed into the threat that was posed to Western economies (international markets, air travel and so on) by infectious diseases. The 'emergence' of these diseases from China and their migration to 'us' was portrayed as inextricably and inevitably linked to Chinese culture and to China's economic modernisation and liberalisation.

In light of this discussion about SARS and *othering*, when approaching the subject of 'mad cow disease', one point of interest was whether there would be some similar blaming mechanism when the threat could not be externalised in the same way. From a British perspective, the blame for the problem clearly could not be laid at the door of 'foreigners' or out-groups as it had been in the case of AIDS, Ebola and SARS. What the research reported in this thesis shows is that throughout the reporting of the 'mad cow disease' story the blame was directed at the government for concealing the threat of the disease and for mismanagement of the crisis. The other group who were blamed were farmers for their concealment of the disease in their herds and for the 'unnatural' practice of feeding animal scraps to cows. Against the theme of government concealment and corrupt farmers there was a theme of those few doctors and scientists brave enough to 'blow the whistle' on the potential danger. Initially, the reporting of the concerns of these people followed the establishment line and they were portrayed as 'hysterical cranks'. Later, the role of these 'heretics' was re-evaluated as their stance seemed to be vindicated.

So if the blame for many EID was focused outwards, on 'foreigners' or out-groups from within mainstream society, with 'mad cow disease' the blame went not outwards, but upwards to 'our leaders'. Similarly, in the case of MRSA the blame for the problem, perhaps surprisingly, was directed less at front-line health workers or hospital cleaners than at deeper structural problems and political decisions that had created the alleged hygiene crisis in the National Health Service, which was portrayed as being at the root of the MRSA epidemic. Thus the blame was again placed squarely with the (Labour)

government of the day and the previous Conservative government for National Health Service cuts and other changes to funding such as the introduction of competitive funding.

In sum, in the case of most EID, we see a model that externalises the blame for the new threat. This blaming / *othering* model connects to similar reactions to new epidemics of infectious diseases seen from the historical record or from the anthropological literature such as cholera, syphilis, leprosy and plague. This pattern was clearly evident in the reporting of SARS, which was the most recent in origin of the three epidemics studied here. However, there are other epidemics where the blame cannot be externalised in the same way. In this case the blame is, in part, directed upwards to 'our leaders'. There was also a strand of blame directed towards what we might call *the way we live now;* in the cases both of 'mad cow disease' and MRSA there was an element of concern with the role of science and technology and its misuse. In the case of 'mad cow disease' this was expressed as concern about the 'unnatural' farming methods which came to light as a result of the epidemic, and with MRSA, about misuse of the twentieth-century's 'magic bullet', antibiotics.

8.2 How this research moves forward Social Representations Theory

One of the strengths of Social Representations Theory is that it allows for a detailed examination of how novel threats are dealt with by a society and in particular how scientific knowledge is transformed via the mass media into widely held notions that become 'common sense'. Chapter 2 described how

social representations acted 'as a bridge between the individual and the social world...[both] structuring beliefs and knowledge about phenomena considered significant for a given community...[and constructing] our reality' (Deaux & Philogene, 2001: 5). This definition implies that the bridge or the representation is somehow outside the individual, a social construct which provides a framework within which new phenomena are interpreted. In this sense, one can imagine the representations of emerging infectious diseases in the newspapers described in this thesis as being part of this 'external' reality. The two key mechanisms at play in constructing social representations are anchoring and objectification. What then does the empirical work reported in this thesis have to add to the theorisation of these?

The research reported here makes a number of novel points on the role of anchors in SRT. Firstly, it contradicts the role that anchors are said to have in SRT, which is that they are always meant to make a new phenomenon more comforting (Moscovici, 2000). This research demonstrates that anchors can dampen a risk, but they can also amplify it. SARS was anchored to diseases with much higher death figures than it in the end had. The choice of anchors was influential in the pessimism that surrounded SARS. The anchors used in mad cow disease were also at first reassuring, in that 'mad cow disease' was framed as a food poisoning or veterinary disease. As already pointed out, AIDS was a big story in 1986, yet there were no connections made between the two stories at the time. Only later, after the 1996 announcement of the link between BSE and vCJD, was the disease re-framed as a risk to human health, a potential plague, *on the scale of AIDS.* Note how the anchoring to AIDS only happens

after 1996, again, once the EID paradigm is established. The paradigm allows for past EID epidemics to be the new anchors for the latest EID. This reiterates the point that anchors do not necessarily comfort; in this case they function to increase the pitch of the risk discourse with each new EID that appears.

One final point that is noteworthy in relation to anchors is the paradoxical way that AIDS was used to anchor different epidemics. Sometimes AIDS was used to anchor a new disease in that it was given as an example of how a rare disease that initially affected only a small number of people could later go on to be a major global pandemic. It is in this (alarmist) sense that AIDS was used to frame the risk from 'mad cow disease' after 1996. However, in other circumstances AIDS was used as an example of a threat that was felt to be have been 'over-hyped'. In the 1990s it was predicted that large numbers of Western heterosexuals would become infected with HIV or would at least to be at risk of HIV infection, a prediction that in the event was not borne out. This latter use of the AIDS anchor as an example of a largely unfounded 'media panic' was (infrequently) used in the cases studied for this thesis. It was present to an extent whenever cynics, either politicians or journalists, argued that the risk of the latest EID was being over-hyped.

SRT holds that the other process by which we make sense of new phenomenon is through the concept of objectification. Objectification overlaps with the notion of metaphor, insofar as a metaphor transfers meaning from one realm or concept onto another. This process is often conventionalised to the point that it is possible to lose sight of the fact that we are thinking and speaking

metaphorically. Abstract ideas become solidified into conventionalised images, symbols and metaphors which are shared (though not necessarily consensually) by members of a particular societal group. For example in the research reported in this thesis the abstract and difficult notion of antibiotic resistant bacteria was conceptualised as a 'superbug'. The notion of 'superbug' carries with it a set of meanings related to other colloquial uses of the prefix 'super'..., such as supermodel (uniqueness), superpower (strength), and superhero (indestructibility). The reporting of MRSA was saturated with military metaphors, a trope which was largely absent in the SARS reporting, due to the proximity of the Iraq War to the SARS epidemic. However, MRSA was portrayed as a 'clever bug' which had evolved to 'outwit' science and biomedicine. By examining the mechanism of objectification, SRT thus casts light on contemporary concerns and cultural resonances.

What was striking about the MRSA coverage in comparison to the other two epidemics examined was that there were no anchors used to describe the new phenomenon. Moscovici's (2000) position is that without anchors, the unknown remains unknowable. Yet MRSA was described not in terms of other disease anchors but rather in terms of existing cultural concepts such as the story of the discovery of antibiotics. This links back to the concept of objectification, as the symbolisation of MRSA was as a 'superbug'. The nemesis for the 'superbug' was symbolised in the form of the 'matron'. The calls to 'bring back matron' thus crystallise a whole set of cultural references, for the regimented gendered authority figure who would restore order,

cleanliness and thus safety to the apparent chaos and danger that lurked in National Health Service hospital wards.

This nostalgia for the figure of matron was mirrored in the nostalgia for a return to imagined golden era of farming and old-fashioned farming methods in the representations of 'mad cow disease'. 'Mad cow' was originally a tabloid hook, but the image of the 'mad' cow also serves as an objectification, particularly after the link between the animal and human disease is made. 'Mad cow disease' later comes to symbolise a fear of the disease because by ingesting animals already made cannibals themselves, the human 'victims' become dehumanised. This revulsion brings to mind the magical contamination that Jodelet (1991) describes in her study, where the foster families feared 'magical' contamination with mental illness from their lodgers.

This thesis thus contributes to SRT in that it has further unpacked the role of anchoring and objectification in making sense of a new threat. Anchors may not always serve to reassure, in fact they can lead to an increasing pitch of alarm. In some cases, anchors may not be present at all in making sense of a new phenomenon. In those cases, other cultural references and symbols (such as the matron, the 'super' bug, etc) serve to capture the abstract and bring it into focus.

8.3 EID as a new biomedical discourse

Stepping back from the detail of the coverage of the three individual diseases makes evident how the 'emerging infectious diseases' paradigm has become an object of cultural production. By aggregating individual and unconnected outbreaks of disparate infectious diseases in different populations, and with different causes and effects, scientists, policy-makers and the journalists who reported on them were able to characterise each individual epidemic as having a significance beyond that which the diseases would have had if not connected by the umbrella category. In the two epidemics reported here that spanned the widespread acceptance of the EID paradigm, we saw examples of diseases that were given greater significance by being anchored onto all other diseases in the same category, in particular HIV / AIDS. By 'talking up' these diseases, scientists and others with an interest in keeping the threats fresh in the mind of the public gave their claims a political marketability which in turn attracted political attention and ultimately research funding. This mechanism goes some way to explaining how infectious diseases were presented as something new, a product of late modernity, and *at the same time* as an inevitable and enduring feature of human existence that never went away, despite what we may have mistakenly thought in the years before AIDS.

8.4 Limitations of this research

The main limitation of this research is that it is somewhat narrow in scope. The theoretical basis of the thesis was Social Representations Theory, the focus of which tends to be on how *novel* threats are assimilated. Thus the empirical work focussed on those periods when the phenomena in question were new and

had to be explained to the reader. The thesis thus gained valuable insights in the transformation of the concepts from, in SRT terms, the 'reified universe' of science to the realm of 'common sense'. However, because of this focus on the early reporting of the stories of the epidemics in question, there may have been many valuable insights lost. For example, there was an outbreak of SARS in Canada after the time frame of the research reported here. Were there similar blaming / *othering* mechanisms at play in the Canadian case?

This raises the second potential limitation of the research reported in this thesis, namely that only British newspapers were used. The reason for this, again, was not entirely pragmatic: in order to examine the way that risks were *othered,* one needed to 'locate' the research in a geographical or social 'place'. In this case, the British newspapers were taken as a starting point from which to do that. Again, though, this approach raises as many questions as it answers: How does coverage in the US or Japan or Canada compare to coverage in Britain?

8.5 Future directions for this research

The research reported in this thesis provides only part of the social representations of EID. The focus of the empirical work reported in this thesis is the way the mass media transforms scientific knowledge into the lay understandings that become embedded as 'common sense'. The question that remains is whether this media picture is similar to that which is to be found in the accounts of its audience. This is important since alarmist mass media does

not necessarily raise anxiety in its audience. Defence by way of representation can step in to allay anxiety. Therefore, the rather complex interrelationship of media and mind in how publics construct emerging infectious diseases must be a subject of further research.

Having said that, this thesis adds to a growing body of empirical studies on media representations of 'emerging infectious diseases' and highlights a growing strand in modern media-medical discourse in which the public is faced with one novel infectious disease phenomenon after another. Each new threat becomes politicised to a greater or lesser extent and generates much coverage before the novelty and the news value dims and it is replaced by a more newsworthy infectious disease. Whether this array of potential disasters generates cumulative anxiety *a la* Beck or leads to fatalism and indifference must also be the subject of future research.

Appendices

Appendix (i) Major Etiologic Agents, Infectious Diseases Identified Since 1972

From Satcher (1995) and Desselberger (2000)

Year	Agent	Disease
1972	Small round structures viruses (SRSVs: calciviruses)	Diarrhoea (outbreaks)
1973	Rotavirus	Major cause of infantile diarrhoea worldwide
1975	Astroviruses	Diarrhoea (outbreaks)
1975	Parvovirus B19	Fifth disease; Aplastic crisis in chronic hemolytic anaemia
1976	*Cryptosporidium parvum*	Acute enterocolitis
1977	Ebola virus	Ebola hemorrhagic fever
1977	*Legionella pneumophila*	Legionnaires' disease
1977	Hantaan virus syndrome	Hemorrhagic fever with renal syndrome (HFRS)
1977	Campylobacter spp.	Enteric pathogens distributed globally
1980	Human T-cell lymphotropic virus-I (HTLV I)	Adult T-cell lymphoma-leukaemia
1981	Staphylococcus toxin	Toxic shock syndrome associated with tampon use
1982	HTLV II	Hairy cell leukemia
1982	Borrelia burgdorferi	Lyme disease
1983	*Escherichia coli* O157:H7,	Hemorrhagic colitis; hemolytic uremic syndrome
	Human immuno-virus (HIV)	AIDS
1983	*Helicobacter pylori*	Gastric ulcers

Year	Agent	Disease
1988	Human herpesvirus-6 (HHV-6)	Roseola subitum
1989	*Ehrlichia chaffeensis*	Human ehrlichiosis
1989	Hepatitis C virus (HCV)	Parenterally transmitted, non A non B hepatitis
1990	Human herpesvirus-7 (HHV-7)	Exanthema subitum, pityriasis rosea
1990	Hepatitis E virus (HEV)	Enterically transmitted non-A non-B hepatitis
1991	Hepatitis F virus (HFV)	Severe non-A non-B hepatitis
1991	Guanarito virus	Venezuelan hemorrhagic fever
1992	*Vibrio cholerae* O139	New strain associated with epidemic cholera
1992	Bartonella (= Rochalimaea)	Cat-scratch disease; bacillary angiomatosis henselae
1993	Sin nombre virus	Hantavirus pulmonary syndrome ('Four Corners disease')
1994	Hepatitis G virus (HGV)	Non A-C hepatitis
1994	Sabia virus	Brazilian hemorrhagic fever
1994	Kaposi sarcoma-associated herpesvirus (KSHV)	Castleman's disease
1995	Hendravirus	Meningitis, encephalitis
1996	prion (?BSE)	New variant Cruetzfeld-Jakob disease
1997	Influenza A virus (H5N1)	Influenza (Hong Kong)
1997	Transfusion-transmitted Virus (TTV)	?
1997	Enterovirus 71 (EV71)	Epidemic encephalitis
1998	Nipahvirus	Meningitis, encephalitis
1999	Influenza A virus (H9N2)	Influenza (Hong Kong)
1999	West Nile-like virus	Encephalitis (New York)

Appendix (ii) Availability of full text newspaper articles through Lexis-Nexis

- *The Guardian* from July 1984
- *The Times / The Sunday Times* from July 1985
- *The Daily Telegraph / The Sunday Telegraph* from September 1988
- *The Independent / The Independent* on Sunday from September 1988
- *The Daily Mail / The Mail on Sunday* from January 1992
- *The Daily Mirror / The Sunday Mirror* from May 1995
- *The Express* from October 1999
- *The Observer* from October 1990
- *The Sun* from January 2000
- *The News of the World* from July 1998

(See http://web.nexis.com/sources/)

Availability of full text journals via web:

- *British Medical Journal* from January 94
  (See http://www.bmj.com/all.shtml)
- *The Lancet* from July 96 (or September 94 through Lexis-Nexis)

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